Electromechanical sensors for pressure control
XM range

Catalogue

YAGEO GROUP Brings you | Telemecanique Sensors

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Electromechanical pressure and vacuum switches for control circuits

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XM Range

Applications	Type of installation	**Control circuits**	
	Fluids controlled	**Air, water, hydraulic oils, corrosive fluids, viscous products**	
	Type of operation	**Detection of a single threshold (fixed differential)**	**Regulation between 2 thresholds (adjustable differential)**
			
Fluid characteristics		Air, fresh water, corrosive fluids, viscous products, up to 160°C Sea water, up to 30 °C, depending on model	
Sizes		- 1 bar…500 bar (- 14.5 psi…7250 psi)	
Dimensions of case (mm)	Width x height x depth	35 x 68 x 75	
Type of contacts		1 CO single-pole, snap action	
Degree of protection		IP 66: switches with terminal connections IP 65: switches with connector	
Electrical connection	Connector	EN 175301-803-A (ex-DIN 43650A), 4-pin male.	
	Screw terminals:	■ 1 tapped entry M20 x 1.5 mm for ISO cable gland or ■ 1 tapped entry 1/2"-14 NPT for cable gland, depending on model.	
Fluid connection		G 1/4 (female) 1/4" - 18 NPTF (female) G 1¼" (female) for viscous products	
Type reference		**XMLA**	**XMLB**
Pages		20 to 56	
Other versions		Electromechanical pressure and vacuum switches with alternative tapped cable entries and/or fluid entries: NPT etc. Please consult our Customer Care Centre.	

Control circuits	
Air, water, hydraulic oils, corrosive fluids, viscous products	
Regulation between 2 thresholds (adjustable differential)	**Dual stage switches Detection at each threshold (fixed differential)**
	
Air, fresh water, corrosive fluids, viscous products, up to 160°C Sea water, up to 30 °C, depending on model	
- 1 bar…500 bar (- 14.5 psi…7250 psi)	
46 x 68 x 85	
2 CO single-pole, simultaneous, snap action	2 CO single-pole, staggered, snap action
IP 66: switches with terminal connections	
■ EN 175301-803-A (ex-DIN 43650A), 4-pin male.	
■ 1 tapped entry M20 x 1.5 mm for ISO cable gland or ■ 1 tapped entry 1/2"-14 NPT for cable gland, depending on model.	
G 1/4 (female) 1/4" - 18 NPTF (female) G 1¼" (female) for viscous products	
XMLC	**XMLD**
20 to 56	

Electromechanical sensors for pressure control

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Applications	Type of installation	**Control circuits**
	Fluids controlled	**Air, water**
	Type of operation	**Regulation between 2 thresholds (adjustable differential)**

Fluid characteristics		Air, fresh water, sea water (0…+ 70°C)	
Sizes		6 bar, 12 bar and 25 bar (87 psi, 174 psi and 362.5 psi)	
Dimensions of case (mm)	Width x height x depth	57 x 78 x 97.5	
Setting of switching points		Internal screws	External screws
Type of contacts		1 CO single-pole, snap action	
Degree of protection		IP 54	
Electrical connection	Screw terminals	■ 2 entries tapped for n° 13 cable gland, ■ one fitted with n° 13 cable gland, ■ one fitted with blanking plug.	
Fluid connection		G 1/4 or 4 x G 1/4 (female), depending on model	
Type reference		**XMX**	**XMA**
Pages		66 to 69	

Other versions

Electromechanical pressure switches with alternative tapped cable entries and/or fluid entries: ISO, NPT, etc. Please consult our Customer Care Centre.

Power circuits			
Water			**Air, water**
Regulation between 2 thresholds (adjustable differential)			

Fresh water, sea water (0…+ 70°C)			Air, fresh water, sea water (0…+ 70°C)
4.6 bar (66.7 psi)	7 bar (101.5 psi)	10.5 bar (152.3 psi)	6 bar, 12 bar and 25 bar (87 psi, 174 psi and 362.5 psi)
72 x 77 x 106	72 x 73 x 102		57 x 78 x 97.5
Internal screws			
2 NC snap action			2 NC or 3 NC snap action
IP 20/IP 65			IP 54 or IP 65, depending on model
2 cable entries with grommet or 2 cable entries with n° 13 cable gland			2 entries incorporating n° 13 cable gland or without cable gland, depending on mode
G 1/4 or R 1/4 (female or male)			G 1/4, G 3/8 or 4 x G 1/4 (female), depending on model
FSG●	**FYG22**	**FYG32**	**XMP**
71 to 73			74 to 84

Electromechanical pressure and vacuum switches
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Function

The function of pressure and vacuum switches is the control or regulation of pressure or vacuum levels in hydraulic or pneumatic systems.
They transform the pressure change into a digital electrical signal when the preset switching points are reached.

Switches for power circuits

Switches with power electrical contacts, either 2-pole or 3-pole, designed for direct switching of single-phase or 3-phase motors (pumps, compressors, etc.).

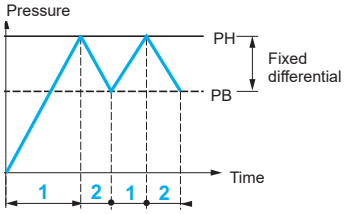
Switches for control circuits

Switches with standard electrical contacts, designed for control of contactors, relays, power valves, PLC inputs, etc.

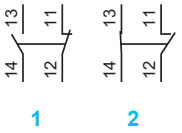
Pressure switch operating principle

Detection of a single threshold

The switches for detection of a single threshold (fixed differential) have a single adjustable setting point (PH). The differential between the high and low points (PH - PB) depends upon the natural characteristics of the switch. It is not adjustable.



Example: contact schematics of XMLA

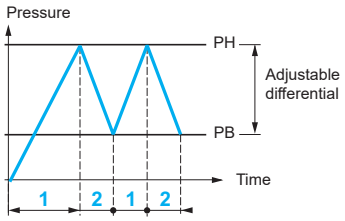


— Adjustable value
--- Non adjustable value

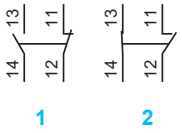
PH = High point
PB = Low point

Regulation between 2 thresholds

The switches for regulation between 2 thresholds (adjustable differential) have both a high point setting (PH) and a low point setting (PB). Both of these points can be independently adjusted.



Example: contact schematics of XMLB

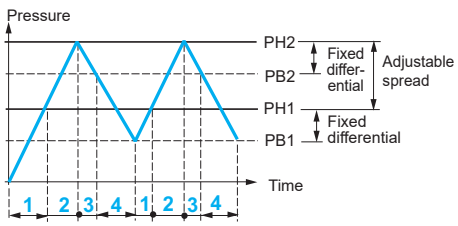


— Adjustable value

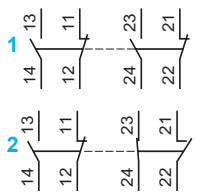
PH = High point
PB = Low point

Detection of 2 thresholds

The dual stage switches, for detection at each threshold, have an adjustable high point setting for each stage (PH1 and PH2). Both of these points can be independently adjusted. For both stages, the differential between the high point and the low point (PH1 - PB1 and PH2 - PB2) depends upon the natural characteristics of the switch. It is not adjustable.

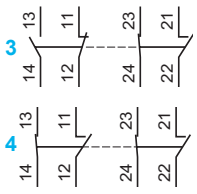


Example: contact schematics of XMLD



— Adjustable value
--- Non adjustable value

PH = High point
PB = Low point



Electromechanical pressure and vacuum switches
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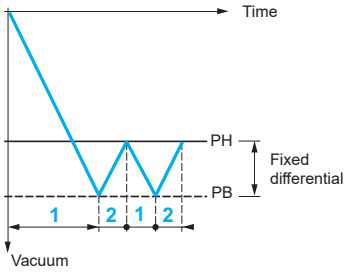
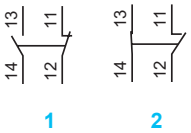
Vacuum switch operating principle

Detection of a single threshold

The switches for detection of a single threshold (fixed differential) have a single adjustable setting point (PH). The differential between the high and low points (PH - PB) depends upon the natural characteristics of the switch. It is not adjustable.



Example: contact schematics of XMLA

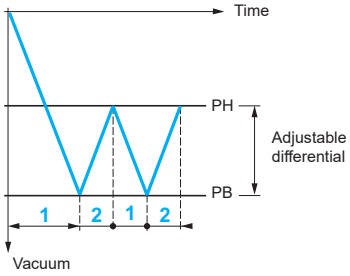


— Adjustable value
--- Non adjustable value

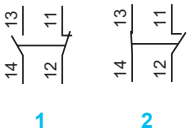
PH = High point
PB = Low point

Regulation between 2 thresholds

The switches for regulation between 2 thresholds (adjustable differential) have both a high point setting (PH) and a low point setting (PB). Both of these points can be independently adjusted.



Example: contact schematics of XMLB

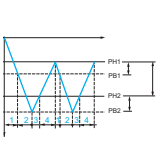


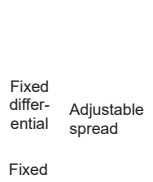
— Adjustable value

PH = High point
PB = Low point

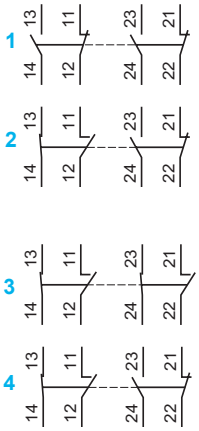
Detection of 2 thresholds

The dual stage switches, for detection at each threshold, have an adjustable high point setting for each stage (PH1 and PH2). Both of these points can be independently adjusted.
For both stages, the differential between the high point and the low point (PH1 - PB1 and PH2 - PB2) depends upon the natural characteristics of the switch. It is not adjustable.





Example: contact schematics of XMLD



— Adjustable value
--- Non adjustable value

PH = High point
PB = Low point

Electromechanical pressure and vacuum switches
XM range

Terminology

Operating range
The difference between the minimum low point (PB) and the maximum high point (PH) setting values.

Size
Pressure switches and vacuum-pressure switches (vacu-pressure switches)
Maximum value of the operating range.

Vacuum switches
Minimum value of the operating range.

Switching point on rising pressure (PH)
Pressure switches
The upper pressure setting at which the pressure switch will actuate the contacts on rising pressure.

Vacuum switches
The lower vacuum setting at which the vacuum switch will reset the contacts on rising pressure.

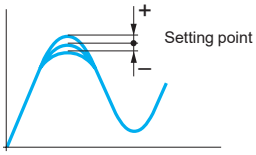
Switching point on falling pressure (PB)
The pressure at which the switch output changes state on falling pressure.

Switches with fixed differential
The lower point (PB) is not adjustable and is entirely dependent on the high point setting (PH) and the natural differential of the switch.

Switches with adjustable differential
The adjustable differential enables the independent setting of the lower point (PB).

Differential
The difference between the switching point on rising pressure (PH) and the switching point on falling pressure (PB).

Spread
For dual stage switches, the spread indicates the difference between the 2 switching points on rising pressure (PH2 and PH1) and, for vacuum switches, the difference between the 2 switching points on falling pressure (PB2 and PB1).

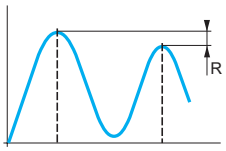
Accuracy (switches with setting scale)


The tolerance between the point at which the switch actuates its contacts and the value indicated on the setting scale. Where very high setting accuracy is required (initial installation of the product), it is recommended to use separate measuring equipment (pressure gauge, etc.).

Electromechanical pressure and vacuum switches
XM range

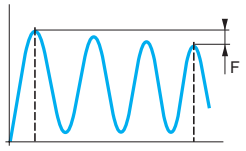
Terminology (continued)

Repeat accuracy (R)



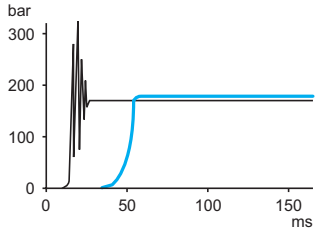
The tolerance between two consecutive switching operations.

Drift (F)

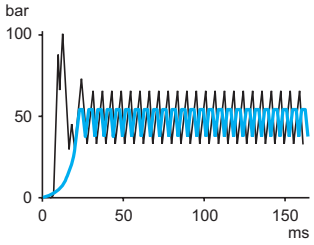


The tolerance of the switching point throughout the entire service life of the switch.

Accidental overpressure



Example 1: with destructive pressure level.



Example 2: with destructive pressure level and destructive pressure oscillations.
— Without damping device
— With damping device

This is an accidental pressure surge of very short duration (a few milliseconds).

If accidental overpressures occur and their duration is less than 50 milliseconds, the pressure damping device incorporated in the XML switches (sizes 10 bar and greater) will diminish the effect.

Maximum permissible pressure per cycle (Ps)

A pressure switch can withstand this pressure, without detrimental effect, on each cycle throughout its service life.

Its minimum value is at least equal to 1.25 times the switch size.

Maximum permissible accidental pressure

The maximum accidental pressure is at least equal to 2.25 times the switch size.

Destruction pressure

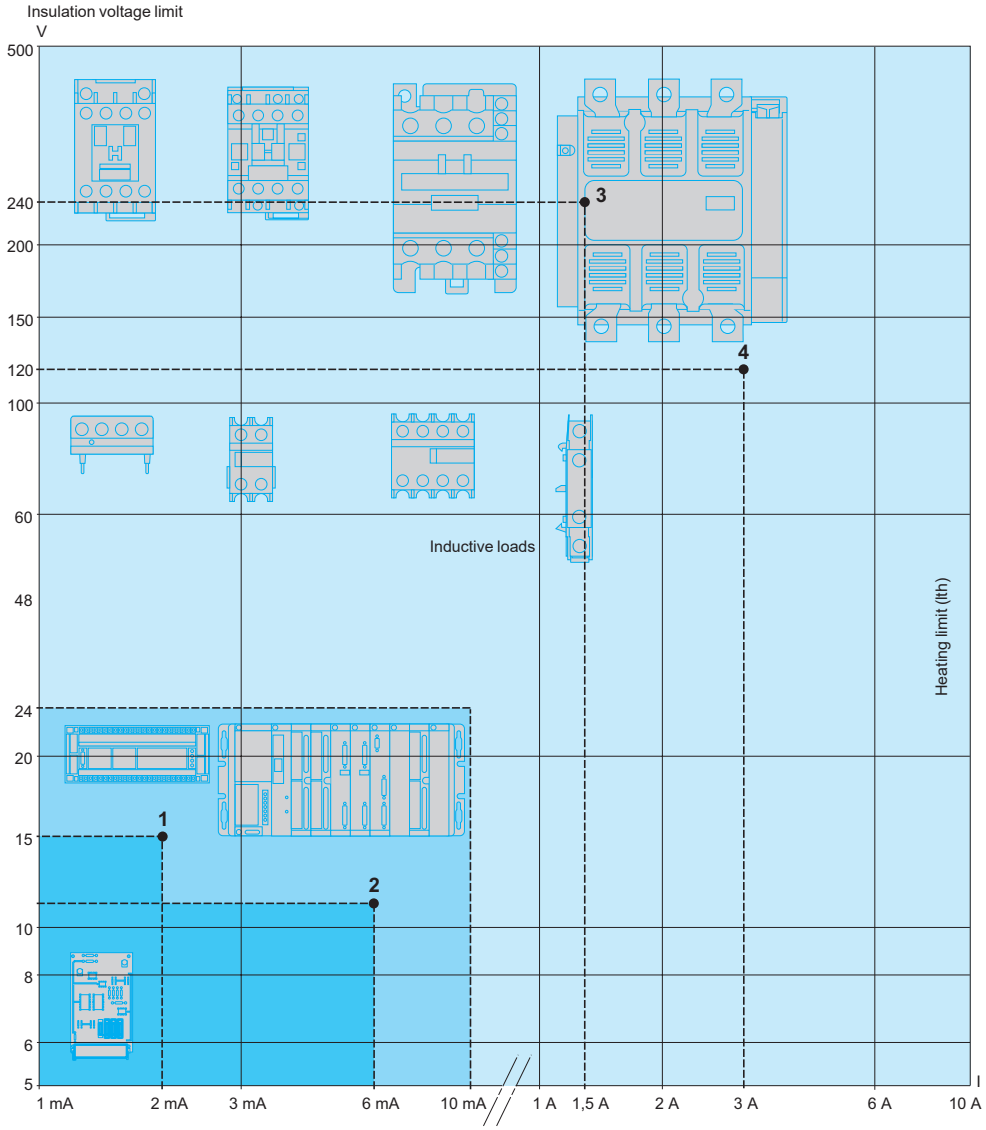
The maximum guaranteed pressure that the switch will withstand before its destruction, i.e. bursting, rupturing, component failure, etc.

Its value is at least equal to 4.5 times the switch size.

Electromechanical pressure and vacuum switches
XM range

Application range of pressure and vacuum switches XML, XMA and XMX, for control circuits

On standard loads
Continuous duty, frequent switching.



1 Standard PLC input, type 1
2 Standard PLC input, type 2
3 Switching capacity conforming to IEC 60947-5-1, utilisation category AC-15, DC-13
B300 240 V 1.5 A
R300 250 V 0.1 A
4 Switching capacity conforming to IEC 60947-5-1, utilisation category AC-15, DC-13
B300 120 V 3 A
R300 125 V 0.22 A
PLC: Programmable Logic Controller

Pressure switches	Application range
XMLA XMLB XMLC XMLD XMX, XMA	
XMLG XMLK	

On small loads
The use of electromechanical pressure and vacuum switches with programmable logic controllers is becoming more predominant.
On small loads, the reliability of the switches maintain a failure rate of less than 1 for 100 million operating cycles.

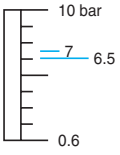
Electromechanical pressure and vacuum switches
XM range

Selection of switch size

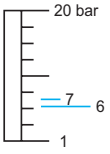
After establishing the type of switch required for the application (single threshold detection or regulation between 2 thresholds), the selection of its size will depend on the following criteria:
- the differential: difference between the high point (PH) and the low point (PB),
- the maximum pressure permissible per cycle,
- repeat accuracy, precision and minimum drift.

Examples of a fixed differential pressure switch selection, for detection of a single threshold

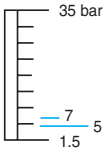
Main criterion: minimum differential
Example: for a selected high point (PH) of 7 bar



XMLA010●●●●●
Differential = 0.5 bar



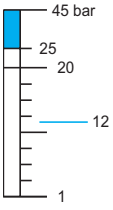
XMLA020●●●●●
Differential = 1 bar



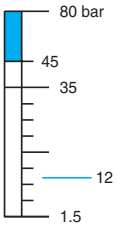
XMLA035●●●●●
Differential = 2 bar

Select an XMLA010●●●●● (the lowest size)

Main criterion: tolerance to overpressures
Example: for a selected high point (PH) of 12 bar



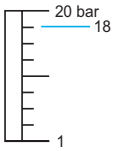
XMLA020●●●●●
Permissible accidental overpressure = 45 bar



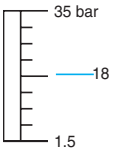
XMLA035●●●●●
Permissible accidental overpressure = 80 bar

Select an XMLA035●●●●● (the highest size)

Main criterion: repeat accuracy, precision and minimum drift
Example: for a selected high point (PH) of 18 bar



XMLA020●●●●●
Adjustable from 1 to 20 bar



XMLA035●●●●●
Adjustable from 1.5 to 35 bar

Select an XMLA035●●●●●

As a general rule, working at the upper or lower limits of the operating range should be avoided.

Units of pressure conversion table

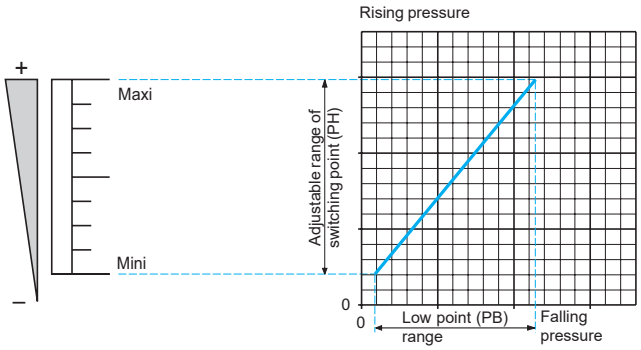
	psi	kg/cm²	bar	atm	mm Hg (Torr)	mm H_2O	Pa
1 psi =	1	0.07031	0.06895	0.06805	51.71	703.7	6895
1 kg/cm² =	14.22	1	0.98066	0.96784	735.55	10 000	98 066
1 bar =	14.50	1.0197	1	0.98695	750.06	10 197	10^5
1 atm =	14.70	1.0333	1.0132	1	760.0	10 333	101 325
1 mm Hg (Torr) =	0.01934	1.360×10^{-3}	1.333×10^{-3}	1.316×10^{-3}	1	13.59	133.3
1 mm H_2O =	1.421×10^{-3}	10^{-4}	$\sim 10^{-4}$	$\sim 10^{-4}$	0.07361	1	~ 9.80
1 Pa =	1.45×10^{-4}	1.0197×10^{-5}	10^{-5}	9.8695×10^{-6}	7.5×10^{-3}	0.10197	1

Example: 1 bar = 14.50 psi = 10^5 Pa

Electromechanical pressure and vacuum switches

Fixed differential switches, for detection of a single threshold

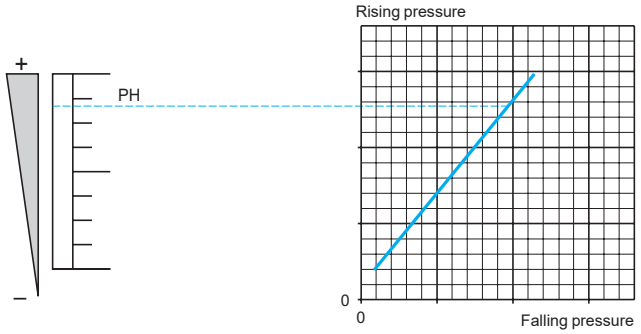
Adjustment range of the high point



Defined by the difference between the minimum and maximum high point (PH) setting values.

For a high set point (PH), the lower point (PB) is fixed and cannot be adjusted.
For a low set point (PB1 or PB2), the higher point (PH1 or PH2) is fixed and cannot be adjusted.

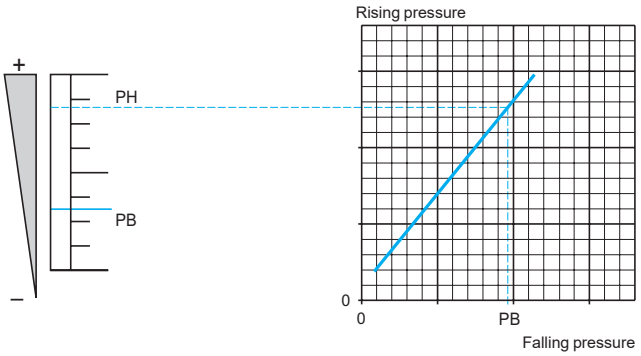
Switching point on rising pressure (PH)



The upper pressure setting at which the pressure or vacuum switch will actuate the contacts on rising pressure.

Adjustable throughout the range on rising pressure.

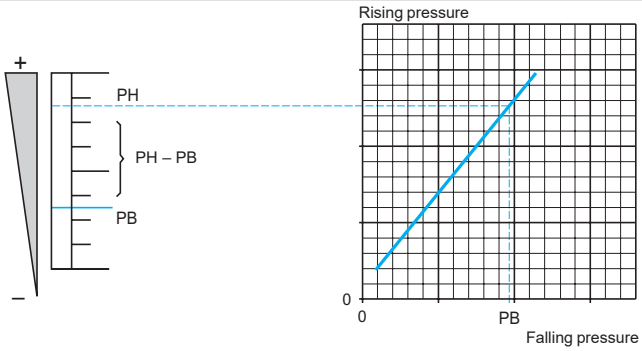
Switching point on falling pressure (PB)



The pressure at which the switch contact changes state on falling pressure.

The lower point (PB) is not adjustable and is entirely dependent on the high point setting (PH) and the natural differential of the switch.

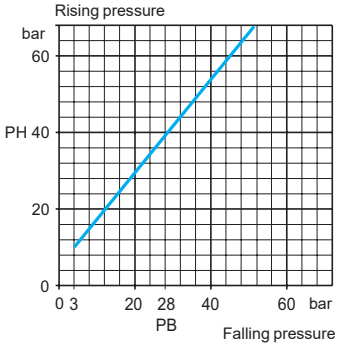
Differential



PH - PB = natural differential
The difference between the switching point on rising pressure (PH) and the switching point on falling pressure (PB).

This point is not adjustable and therefore, the value of the differential is fixed.
It is the natural differential of the switch (contact differential, friction, etc.).

Example

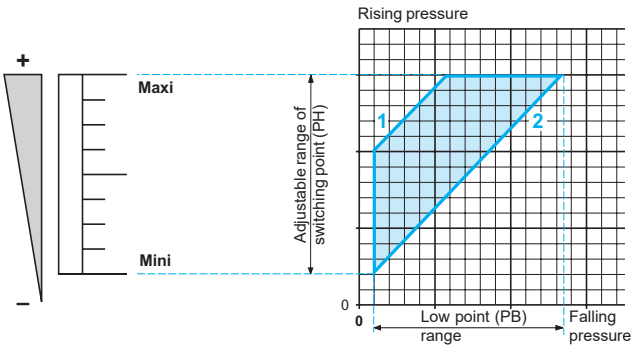


■ Consider a switching point on rising pressure (PH) of 40 bar (set value at which the contact will change state on rising pressure).
■ It can be seen that the switching point on falling pressure (PB) is 28 bar (fixed value at which the contact will return to its original state).
Conclusion:
□ the differential will be 40 - 28 = 12 bar.

Electromechanical pressure and vacuum switches

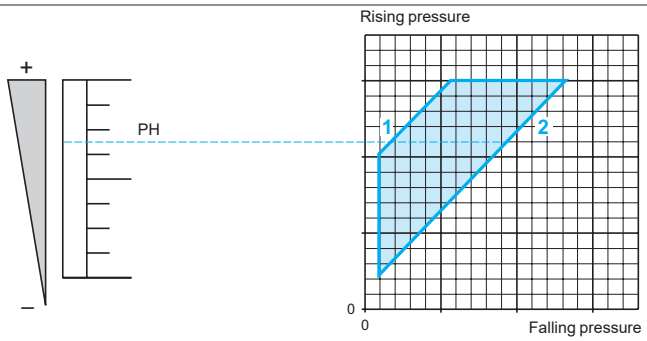
Adjustable differential switches, for regulation between 2 thresholds

Adjustment range of the high point



Defined by the difference between the minimum and maximum high point (PH) setting values.

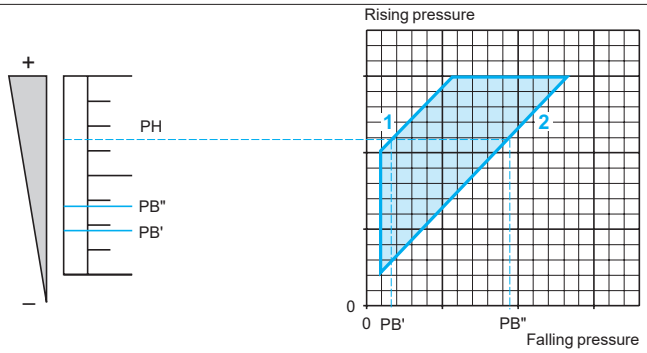
Switching point on rising pressure (PH)



The upper pressure setting at which the pressure or vacuum switch will actuate the contacts on rising pressure.

Adjustable throughout the range on rising pressure.

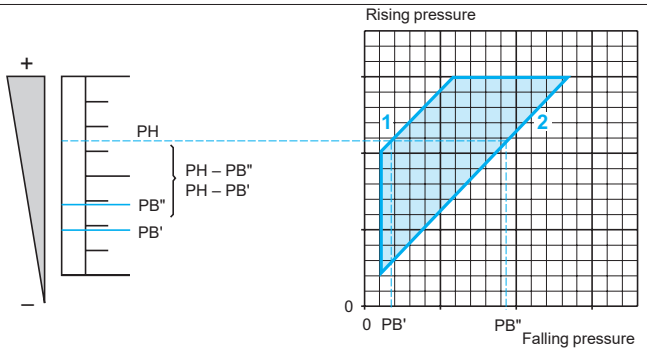
Switching point on falling pressure (PB)



The pressure at which the switch contact changes state on falling pressure.

The adjustable differential enables the independent setting of the lower point (PB).

Differential

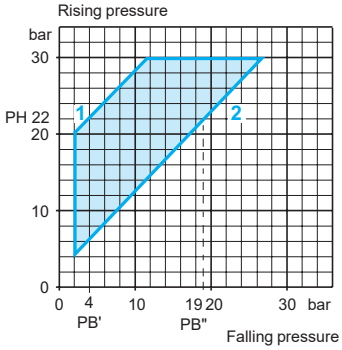


Low point < High point
PH - PB' = natural differential
PH - PB" = minimum differential

The difference between the switching point on rising pressure (PH) and the switching point on falling pressure (PB).

Note: *the low point can be set at any value between PB' and PB" .*

Example



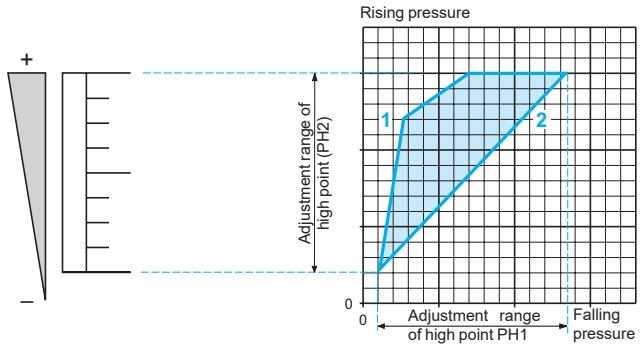
1 Maximum differential
2 Minimum differential

■ Consider a switching point on rising pressure (PH) of 22 bar (set value at which the contact will change state on rising pressure).
■ It can be seen that the switching point on falling pressure (PB) can be between 4 and 19 bar inclusive (set value at which the contact will return to its original state).
Conclusion:
□ the maximum differential will be: 22 - 4 = 18 bar,
□ the minimum differential will be: 22 - 19 = 3 bar.

Electromechanical pressure and vacuum switches

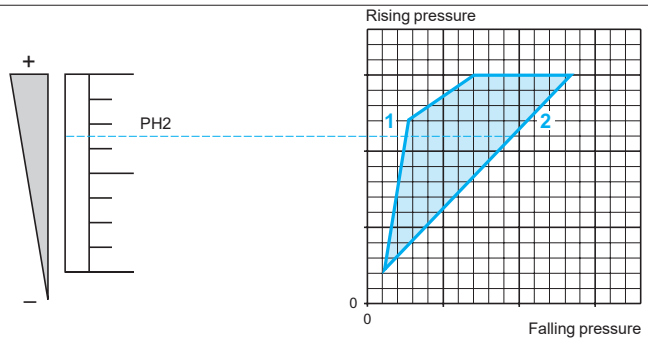
Dual stage, fixed differential switches, for detection at each threshold

Adjustment ranges of the switching points PH1 and PH2 on rising pressure



Defined by the difference between the minimum and maximum high point setting values of each stage (PH1 and PH2).

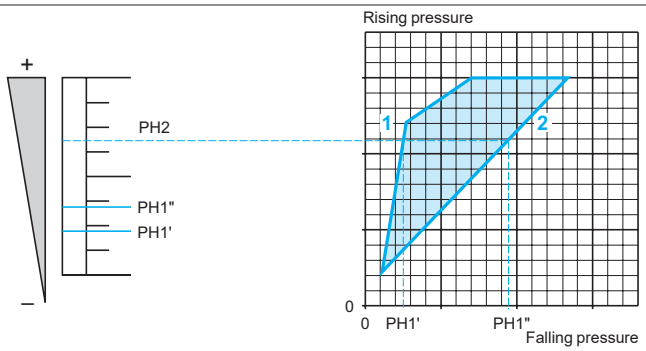
Switching point PH2 on rising pressure



The upper pressure setting at which the pressure or vacuum switch will actuate the contacts on rising pressure.

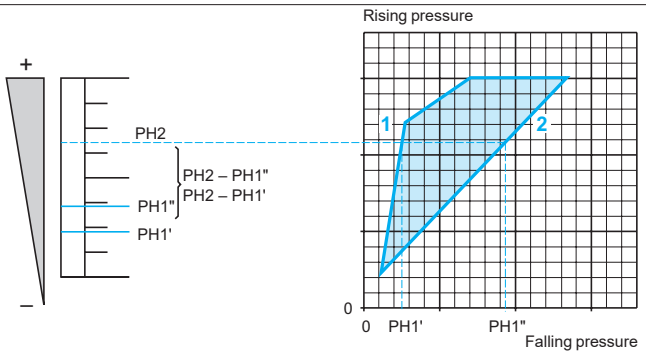
Adjustable throughout the range on rising pressure.

Switching point PH1 on rising pressure



The upper pressure setting at which the pressure or vacuum switch will actuate contact 1 on rising pressure.

Spread

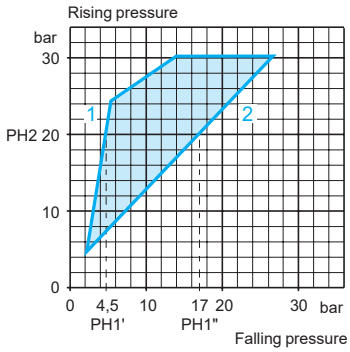


PH1 < PH2
PH2 - PH1' = maximum spread
PH2 - PH1" = minimum spread

The difference between switching points PH2 and PH1 on rising pressure.

Note: *switching point PH1 can be set at any value between PH1' and PH1"* .

Example: Determining switching points on rising pressure for the 2 stages



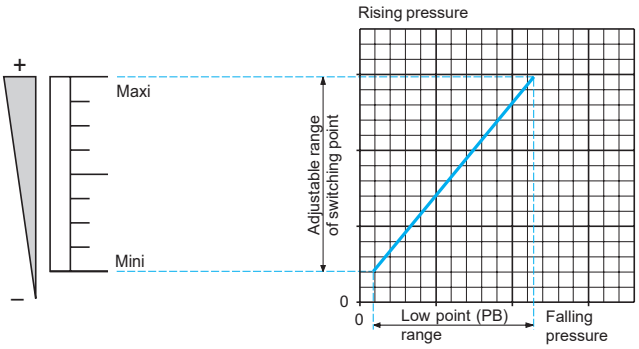
1 Maximum spread
2 Minimum spread

■ Consider a 2nd stage switching point on rising pressure (PH2) of 20 bar (set value at which contact 2 will change state on rising pressure).
■ It can be seen that the 1st stage switching point (PH1) can be set between 4.5 and 17 bar on rising pressure.
Conclusion:
□ the maximum spread will be:
20 - 4.5 = 15.5 bar,
□ the minimum spread will be:
20 - 17 = 3 bar.

Electromechanical pressure and vacuum switches

Dual stage, fixed differential switches, for detection at each threshold

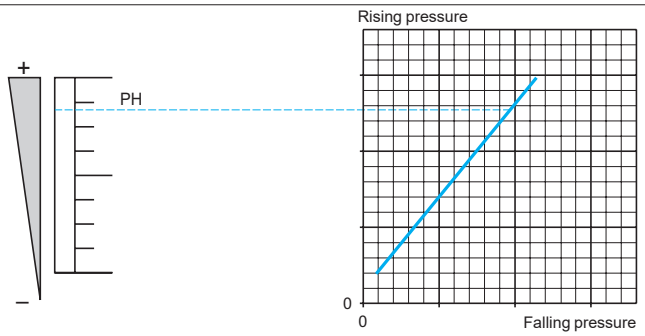
Adjustment range of high point (PH1 or PH2)



Defined by the difference between the minimum and maximum high point (PH1 or PH2) setting values for each stage.

For a high set point (PH), the lower point (PB) is fixed and cannot be adjusted.
For a low set point (PB1 or PB2), the higher point (PH1 or PH2) is fixed and cannot be adjusted.

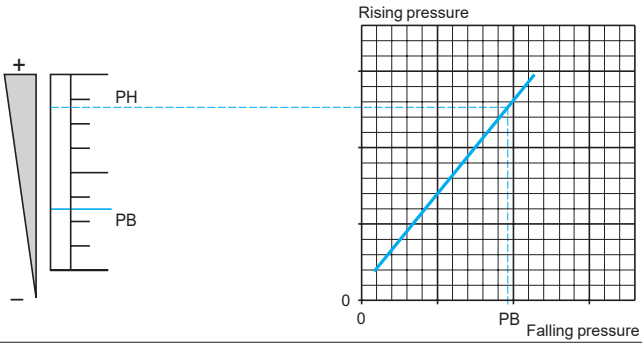
Switching point on rising pressure (PH1 or PH2)



The upper pressure setting at which the pressure or vacuum switch will actuate the contact, for each stage, on rising pressure.

Adjustable throughout the range on rising pressure.

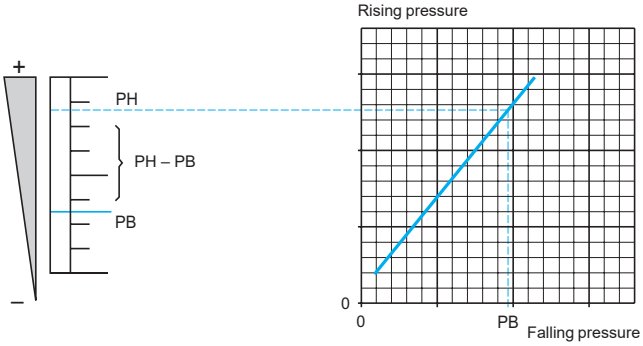
Switching point on falling pressure (PB1 or PB2)



The pressure at which the switch contact changes state, for each stage, on falling pressure.

The lower point (PB) is not adjustable and is entirely dependent on the high point setting (PH) and the natural differential of the switch.

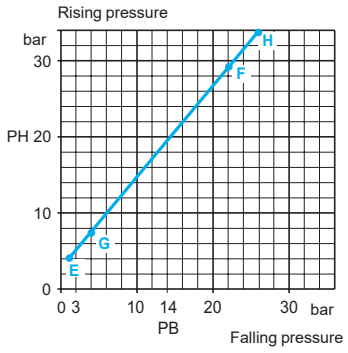
Differential



PH - PB = natural differential
The difference between the switching point on rising pressure (PH) and the switching point on falling pressure (PB), for each stage.

This point is not adjustable and therefore, the value of the differential is fixed.
It is the natural differential of the switch (contact differential, friction, etc.), for each of its 2 stages.

Example: stage 1 = segment EF stage 2 = segment GH



1 Maximum spread
2 Minimum spread

For stage 2 (segment GH):
■ Consider a switching point on rising pressure (PH2) of 20 bar (set value at which contact 2 will change state on rising pressure).
■ It can be seen that the switching point on falling pressure (PB2) is 14 bar (fixed value at which contact 2 will return to its original state).
Conclusion:
for stage 2, the differential will be:
20 - 14 = 6 bar.
Repeat the same procedure for stage 1 (segment EF).

Electromechanical pressure and vacuum switches

XM range

XML switches for control circuits

Presentation

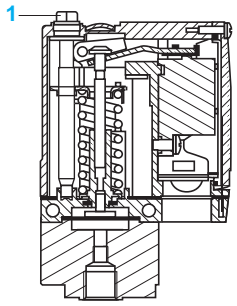
XML pressure and vacuum switches are designed for use in control circuits. They are used to control the pressure of hydraulic oils, fresh water, sea water, air, steam, corrosive fluids or viscous products, up to 500 bar.

XMLA pressure and vacuum switches have a fixed differential and are used for detection of a single threshold. They incorporate 1 CO single-pole contact.
XMLB pressure and vacuum switches have an adjustable differential and are used for regulation between 2 thresholds. They incorporate 1 CO single-pole contact.
XMLC pressure and vacuum switches have an adjustable differential and are used for regulation between 2 thresholds. They incorporate 2 CO single-pole contacts.
XMLD pressure and vacuum switches are dual stage switches, each stage with a fixed differential, and are used for detection at each threshold. They incorporate 2 CO single-pole contacts (one per stage).

Setting

When setting XML pressure and vacuum switches, adjust the switching point on rising pressure (PH) first and then the switching point on falling pressure (PB).

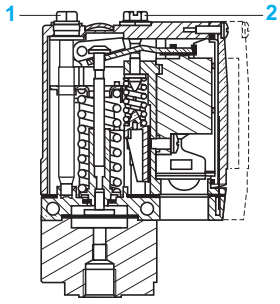
XMLA pressure and vacuum switches with fixed differential



Switching point on rising pressure
The switching point on rising pressure (PH) is set by adjusting the red screw 1.

Switching point on falling pressure
The switching point on falling pressure (PB) is not adjustable.
The difference between the tripping and resetting points of the contact is the natural differential of the switch (contact differential, friction, etc.).

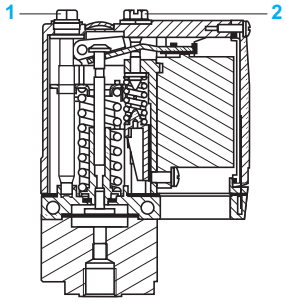
XMLB and XMLC pressure and vacuum switches with adjustable differential



Switching point on rising pressure
The switching point on rising pressure (PH) is set by adjusting the red screw 1.

Switching point on falling pressure
The switching point on falling pressure (PB) is set by adjusting the green screw 2.

XMLD dual stage pressure and vacuum switches with fixed differential for each threshold



Switching point on rising pressure of stage 1 and stage 2
The first stage switching point on rising pressure (PH1) is set by adjusting the red screw 1.
The second stage switching point on rising pressure (PH2) is set by adjusting the blue screw 2.

Switching point on falling pressure
The switching points on falling pressure (PB1 and PB2) are not adjustable.
The difference between the tripping and resetting points of each contact is the natural differential of the switch (contact differential, friction, etc.).

Electromechanical pressure and vacuum switches

XM range

XML switches for control circuits

Environment characteristics

Conformity to standards			CE, IEC/EN 60947-5-1, UL 508, CSA C22-2 no. 14
Product certifications	All products		UL, CSA, EAC
	XMLA and XMLB		CCC
Protective treatment			Standard version “TC”. Special version “TH”
Ambient air temperature		**°C**	For operation: -25…+70. For storage: -40…+70
Fluids or products controlled			Hydraulic oils, air, fresh water, sea water Steam, corrosive fluids, viscous products, depending on model
Materials	Case		zinc alloy
	Component materials in contact with fluid		see page 55
Operating position			All positions
Vibration resistance		**gn**	4 (30...500 Hz) conforming to IEC 60068-2-6 except **XMLeL35eeeee**, **XMLe001eeeee** and **XMLBM03eeeee**: 2
Shock resistance		**gn**	50 conforming to IEC 60068-2-27 except **XMLeL35eeeee**, **XMLe001eeeee**, and **XMLBM03eeeee**: 30
Electric shock protection			Class I conforming to IEC 1140, IEC 536 and NF C 20-030
Degree of protection	Screw terminal models		IP 66 conforming to IEC/EN 60529
	Connector models		IP 65 conforming to IEC/EN 60529
Operating rate		**Op. cycles/ min**	Piston version switches: ⩽ 60 (for temperatures > 0 °C) Diaphragm version switches: ⩽ 120 (for temperatures > 0 °C)
Repeat accuracy			< 2%
Fluid connection			G 1/4 (BSP female) conforming to NF E 03-005, ISO 228 or 1/4”-18 NPTF For sizes ⩾ 300 bar, use the gasket supplied with the product. This gasket is also available as a separate part, reference **XMLZL010**.
Electrical connection	Screw terminal models		ISO M20 x 1.5 or 1/2” NPT tapped entry For an entry tapped for no.13 (DIN Pg 13.5) cable gland, replace the last number of the reference with 1 (for example, **XMLA010A2S12** becomes **XMLA010A2S11**)
	Connector models		EN 175301-803-A (ex-DIN 43650) connector

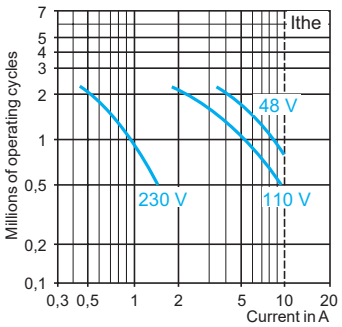
Contact block characteristics

Rated operational characteristics			∼ AC-15, B300 (Ue = 240 V, Ie = 1.5 A; Ue = 120 V, Ie = 3 A) ⎓ DC-13; R300 (Ue = 250 V, Ie = 0.1 A), conforming to IEC 60947-5-1 Appendix A, EN 60947-5-1
Rated insulation voltage			Ui = 500 V conforming to IEC/EN 60947-1 Ui = 300 V conforming to UL 508, CSA C22-2 no. 14
Rated impulse withstand voltage			U imp = 6 kV conforming to IEC/EN 60947-1
Type of contacts			Silver tipped contacts:
	XMLA and **XMLB**		1 CO single-pole contact (4 terminals), snap action
	XMLC		2 CO single-pole contacts (8 terminals), simultaneous, snap action
	XMLD		2 CO single-pole contacts (8 terminals), staggered, snap action
Resistance across terminals		**mΩ**	< 25 conforming to NF C 93-050 method A or IEC 255-7 category 3
Terminal referencing			Conforming to CENELEC EN 50013
Short-circuit protection			10 A cartridge fuse type gG (gI)
Connection			Screw clamp terminals. Minimum clamping capacity: 1 x 0.5 mm²/ AWG 20 Maximum clamping capacity: 2 x 2.5 mm²/AWG 14

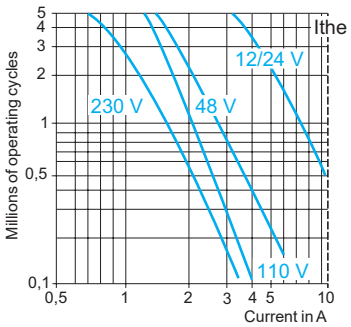
Electrical durability
Conforming to IEC/EN 60947-5-1 Appendix C
Utilisation categories AC-15 and DC-13

Operating rate: 3600 operating cycles/hour
Load factor: 0.5

XMLA and **XMLB**
AC supply ∼ 50/60 Hz
Inductive circuit, Ithe = 10 A



XMLC and **XMLD**
AC supply ∼ 50/60 Hz
Inductive circuit, Ithe = 10 A



DC supply ⎓
Power broken in W
for 1 million operating cycles

Voltage	V	**24**	**48**	**120**
	W	31	29	26

DC supply ⎓
Power broken in W for 5 million operating cycles

Voltage	V	**24**	**48**	**120**
	W	10	7	4

Electromechanical vacuum switches

XM range, XML switches

Size - 1 bar (- 14.5 psi)
Fixed differential, for detection of a single threshold
Switches with 1 CO single-pole contact

XMLA vacuum switches	**With setting scale**

Adjustable range of switching point (PB) (Falling pressure)		**- 0.28…- 1 bar (- 4.06…- 14.5 psi)**
Electrical connection		Terminals
Fluid connection		G 1/4 (female)

References *(1)*

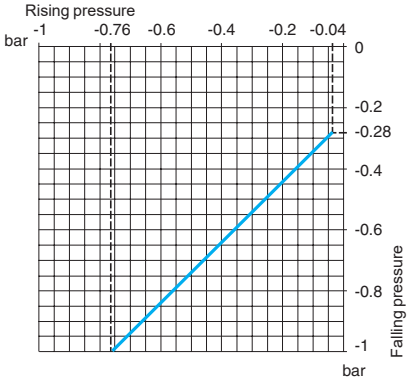
Fluids controlled *(2)*	Hydraulic oils, fresh water, air, up to + 70 °C	**XMLAM01V2S12**
Weight (kg)		0.715

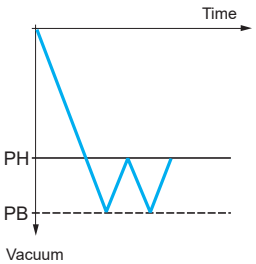
Complementary characteristics not shown under general characteristics (page 17)

Natural differential (add to PB to give PH)	At low setting *(3)*	0.24 bar (3.48 psi)
	At high setting *(3)*	0.24 bar (3.48 psi)
Maximum permissible pressure	Per cycle	5 bar (72.5 psi)
	Accidental	9 bar (130.5 psi)
Destruction pressure		18 bar (261 psi)
Mechanical life		3 x 10^6 operating cycles
Connection		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Vacuum switch type		Diaphragm

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLAM01V2S12** becomes **XMLAM01V2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57.
(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0 05 bar (± 0 72 psi) .

Operating curves





— Adjustable value
--- Non adjustable value

Connection

Terminal model

Other versions	For vacuum switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 194
Dimensions: pages 195 to 197

Electromechanical vacuum switches

XM range, XML switches

Size - 1 bar (- 14.5 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 1 CO single-pole contact

XMLB vacuum switches	With setting scale	
		
Adjustable range of switching point (PB) (Falling pressure)	**- 0.14…- 1 bar (- 2.03…- 14.5 psi)**	
Electrical connection	DIN connector	Terminals
Fluid connection	G 1/4 (female)	G 1/4 (female)

References *(1)*

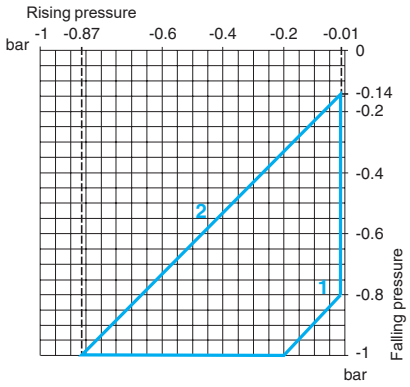
Fluids controlled *(2)*	Hydraulic oils, fresh water, air, up to + 70 °C	**XMLBM02V2C11**	**XMLBM02V2S12**
Weight (kg)		1.015	1.030

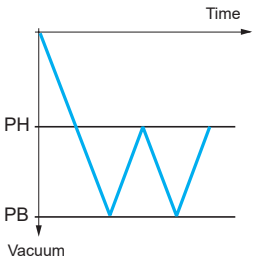
Complementary characteristics not shown under general characteristics (page 17)

Possible differential (add to PB to give PH)	Min. at low setting *(3)*	0.13 bar (1.88 psi)	
	Min. at high setting *(3)*	0.13 bar (1.88 psi)	
	Max. at high setting	0.8 bar (11.6 psi)	
Maximum permissible pressure	Per cycle	5 bar (72.5 psi)	
	Accidental	9 bar (130.5 psi)	
Destruction pressure		18 bar (261 psi)	
Mechanical life		3 x 10^6 operating cycles	
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Vacuum switch type		Diaphragm	

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLBM02V2S12** becomes **XMLBM02V2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57.
(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0 02 bar (± 0 29 psi) .

Operating curves





1 Maximum differential
2 Minimum differential

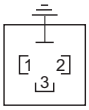
— Adjustable value

Connection

Terminal model

Connector model

Vacuum switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For vacuum switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Electromechanical pressure switches
XM range, XML switches
Size 350 mbar (5.07 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 1 CO single-pole contact

XMLB pressure switches	**With setting scale**

Adjustable range of switching point (PH) (Rising pressure)	**45…350 mbar (0.65…5.07 psi)**
Electrical connection	Terminals
Fluid connection	1/4"-18 NPTF (female)

References *(1)*

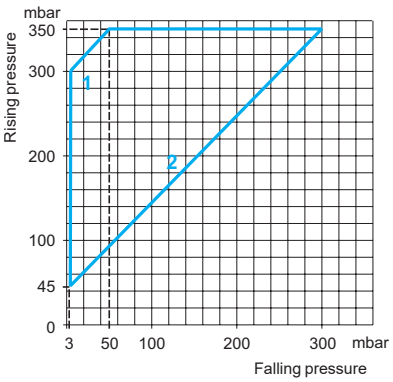
Fluids controlled *(2)*	Hydraulic oils, air, up to + 160 °C	**XMLBL35R2S13**
Weight (kg)		2.575

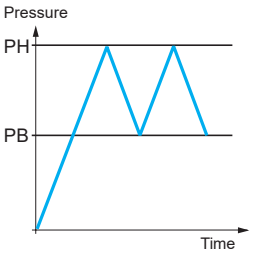
Complementary characteristics not shown under general characteristics (page 17)

Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	42 mbar (0.60 psi)
	Min. at high setting *(4)*	50 mbar (0.72 psi)
	Max. at high setting	300 mbar (4.35 psi)
Maximum permissible pressure	Per cycle	1.25 bar (18.12 psi)
	Accidental	2.25 bar (32.62 psi)
Destruction pressure		4.5 bar (65.25 psi)
Mechanical life		4 million operating cycles
Connection		1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLBL35R2S12** becomes **XMLBL35R2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57.
(3) Deviation of the differential at low setting point for switches of the same size: - 8 mbar, + 3 mbar (- 0 .12 psi, + 0 04 psi) .
(4) Deviation of the differential at high setting point for switches of the same size: ± 8 mbar (± 0 .11 psi) .

Operating curves





1 Maximum differential
2 Minimum differential

— Adjustable value

Connection

Terminal model

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

Electromechanical pressure switches
XM range, XML switches
Size 350 mbar (5.07 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 1 CO single-pole contact

XMLB pressure switches	**30 bar (435 psi) overpressure** **With setting scale**

Adjustable range of switching point (PH) (Rising pressure)	**42…330 mbar (0.61…4.78 psi)**
Electrical connection	Terminals
Fluid connection	G 1/4 (female)

References *(1)*

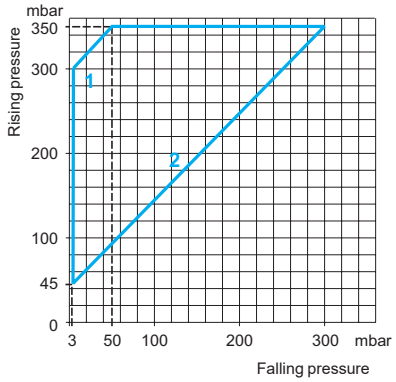
Fluids controlled *(2)*	Hydraulic oils, air, up to + 160 °C	**XMLBS35R2S12**
Weight (kg)		3.500

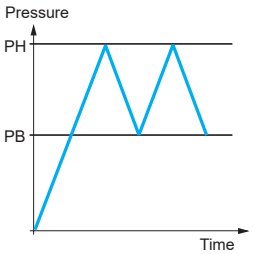
Complementary characteristics not shown under general characteristics (page 17)

Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	33 mbar (0.48 psi)
	Min. at high setting *(4)*	58 mbar (0.84 psi)
	Max. at high setting	250 mbar (3.62 psi)
Maximum permissible pressure	Per cycle	30 bar (435 psi)
	Accidental	37.5 bar (543.75 psi)
Destruction pressure		67.5 bar (978.75 psi)
Mechanical life		2 million operating cycles
Cable entry for terminal models		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Connector type for connector models		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52
Pressure switch type		Diaphragm

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLBS35R1S12** becomes **XMLBS35R1S11**) .*
(2) For component materials of units in contact with the fluid, see page 57.
(3) Deviation of the differential at low setting point for switches of the same size:
- 8 mbar, + 3 mbar (- 0.12 psi, + 0.04 psi) .
(4) Deviation of the differential at high setting point for switches of the same size:
± 8 mbar (± 0.11 psi) .

Operating curves





1 Maximum differential
2 Minimum differential

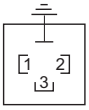
— Adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

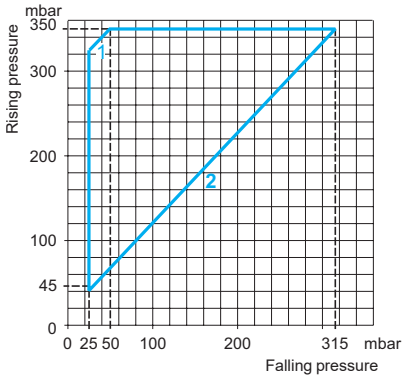
Electromechanical pressure switches
XM range, XML switches
Size 350 mbar (5.07 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 2 CO single-pole contacts

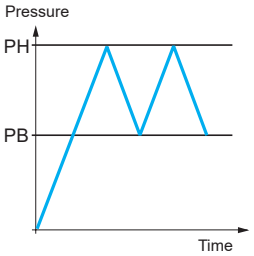
XMLC pressure switches	**30 bar (435 psi) overpressure** **With setting scale**

Adjustable range of switching point (PH) (Rising pressure)		**42…330 mbar (0.61…4.78 psi)**	
Electrical connection		Terminals	
Fluid connection		G 1/4 (female)	1/4”-18 NPTF (female)
References *(1)*			
Fluids controlled *(2)*	Hydraulic oils, air, up to + 160 °C	**XMLCS35R2S12**	**XMLCS35R2S13**
Weight (kg)		3.500	3.500
Complementary characteristics not shown under general characteristics (page 17)			
Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	40 mbar (0.58 psi)	
	Min. at high setting *(3)*	88 mbar (1.27 psi)	
	Max. at high setting	230 mbar (3.33 psi)	
Maximum permissible pressure	Per cycle	30 bar (435 psi)	
	Accidental	37.5 bar (543.75 psi)	
Destruction pressure		67.5 bar (978.75 psi)	
Mechanical life		2 million operating cycles	
Cable entry for terminal models		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	
Pressure switch type		Diaphragm	

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLCL35R2S12** becomes **XMLCL35R2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57.
(3) Deviation of the differential at low setting point for switches of the same size: ± 20 mbar (± 0 29 psi) .

Operating curves

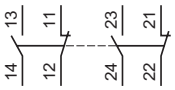




1 Maximum differential
2 Minimum differential

— Adjustable value

Connection
Terminal model



Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

Electromechanical pressure switches

XM range, XML switches

Size 350 mbar (5.07 psi)
Dual stage, fixed differential, for detection at each threshold
Switches with 2 CO single-pole contacts

XMLD pressure switches		**Without setting scale**

Adjustable range of each switching point (Rising pressure)	2nd stage switching point (PH2)	**58…350 mbar (0.84…5.07 psi)**
	1st stage switching point (PH1)	**33…325 mbar (0.48…4.71 psi)**
Spread between 2 stages (PH2 - PH1)		**25…310 mbar (0.36…4.50 psi)**
Electrical connection		Terminals
Fluid connection		G 1/4 (female)

References *(1)*

Fluids controlled *(2)*	Hydraulic oils, air, up to + 160 °C	**XMLDL35R1S12**
Weight (kg)		2.575

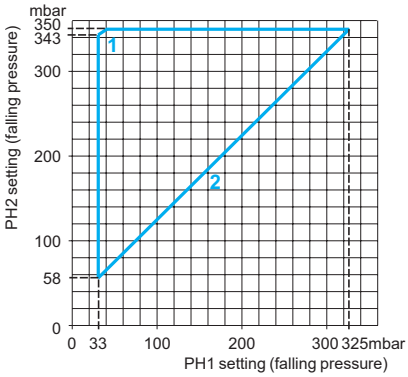
Complementary characteristics not shown under general characteristics (page 17)

Natural differential (subtract from PH1/PH2 to give PB1/PB2)	At low setting *(3)*	30 mbar (0.44 psi)
	At high setting *(4)*	30 mbar (0.44 psi)
Maximum permissible pressure	Per cycle	1.25 bar (18.12 psi)
	Accidental	2.25 bar (32.62 psi)
Destruction pressure		4.5 bar (65.25 psi)
Mechanical life		4 million operating cycles
Cable entry for terminal models		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLDL35R1S12** becomes **XMLDL35R1S11**) .*
(2) For component materials of units in contact with the fluid, see page 57.
(3) Deviation of the differential at low setting point for switches of the same size: ± 10 mbar (± 0 .15 psi) .
(4) Deviation of the differential at high setting point for switches of the same size: ± 8 mbar (± 0 .11 psi) .

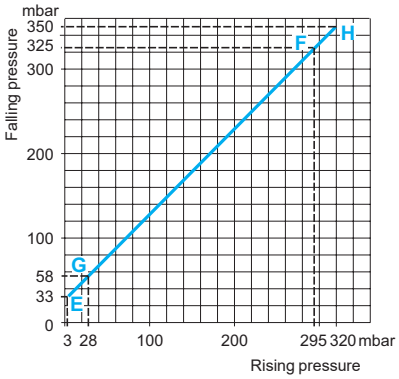
Operating curves

High setting tripping points of contacts 1 and 2

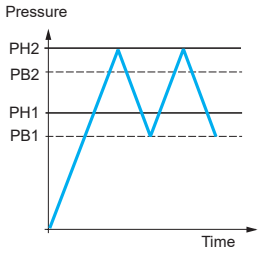


1 Maximum differential
2 Minimum differential

Natural differential of contacts 1 and 2



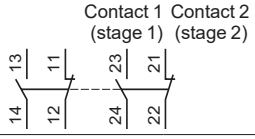
EF Contact 1 (stage 1)
GH Contact 2 (stage 2)



— Adjustable value
--- Non adjustable value

Connection

Terminal model



Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Electromechanical pressure switches
XM range, XML switches
Size 1 bar (14.5 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 1 CO single-pole contact

XMLB pressure switches	With setting scale

Adjustable range of switching point (PH) (Rising pressure)		**0.05…1 bar (0.72…14.5 psi)**
Electrical connection		Terminals
Fluid connection		G 1/4 (female)

References *(1)*

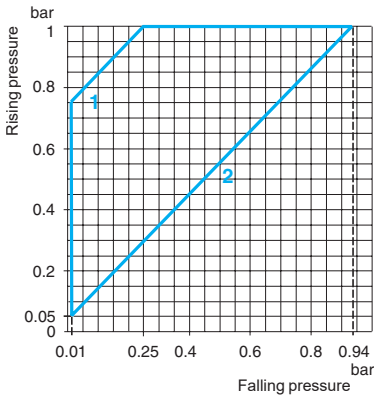
	Fresh water, corrosive fluids, up to + 160 °C	**XMLB001S2S12**
Weight (kg)		2.575

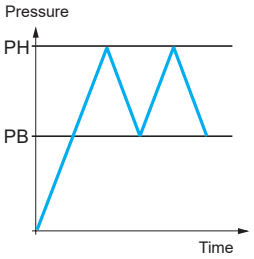
Complementary characteristics not shown under general characteristics (page 17)

Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	0.04 bar (0.58 psi)
	Min. at high setting *(4)*	0.06 bar (0.87 psi)
	Max. at high setting	0.75 bar (10.87 psi)
Maximum permissible pressure	Per cycle	1.25 bar (18.12 psi)
	Accidental	2.25 bar (32.62 psi)
Destruction pressure		4.5 bar (65.25 psi)
Mechanical life		4 x 10^6 operating cycles
Connection		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLB001R2S12** becomes **XMLB001R2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low setting point for switches of the same size: ± 10 mbar (± 0 .14 psi) .
(4) Deviation of the differential at high setting point for switches of the same size: ± 20 mbar (± 0 29 psi) .

Operating curves





1 Maximum differential
2 Minimum differential

— Adjustable value

Connection
Terminal model

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Electromechanical pressure switches

XM range, XML switches

Size 2.5 bar (36.25 psi)
Fixed differential, for detection of a single threshold
Switches with 1 CO single-pole contact

XMLA pressure switches	**With setting scale**	
		
Adjustable range of switching point (PH) (Rising pressure)	**0.15…2.5 bar (2.17…36.25 psi)**	
Electrical connection	DIN connector	Terminals
Fluid connection	G 1/4 (female)	G 1/4 (female)

References *(1)*

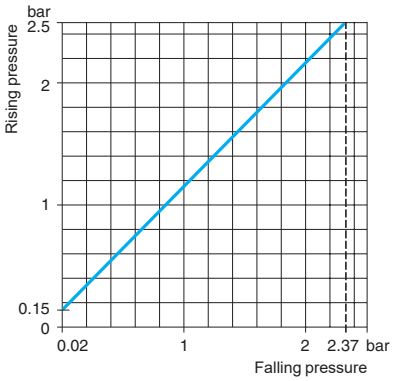
Fluids controlled *(2)*	Hydraulic oils, fresh water, air, up to + 70 °C	**XMLA002A2C11**	**XMLA002A2S12**
Weight (kg)		1.010	0.995

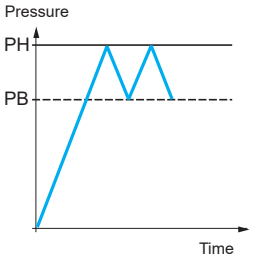
Complementary characteristics not shown under general characteristics (page 17)

Natural differential (subtract from PH to give PB)	At low setting *(3)*	0.13 bar (1.88 psi)	
	At high setting *(3)*	0.13 bar (1.88 psi)	
Maximum permissible pressure	Per cycle	5 bar (72.5 psi)	
	Accidental	9 bar (130.5 psi)	
Destruction pressure		18 bar (261 psi)	
Mechanical life		8 x 10^6 operating cycles	
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm	

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLA002A2S12** becomes **XMLA002A2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57.
(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0 03 bar (± 0 43 psi) .

Operating curves





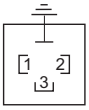
— Adjustable value
--- Non adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Electromechanical pressure switches

XM range, XML switches

Size 2.5 bar (36.25 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 1 CO single-pole contact

XMLB pressure switches	**With setting scale**

Adjustable range of switching point (PH) (Rising pressure)	**0.3…2.5 bar (4.35…36.25 psi)**
Electrical connection	Terminals
Fluid connection	G 1/4 (female)

References *(1)*

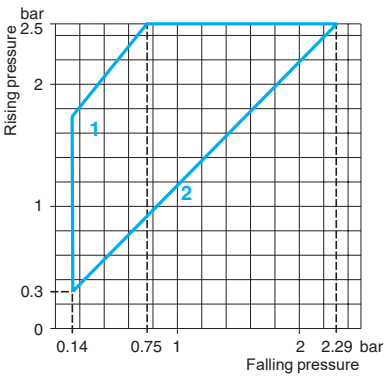
Fluids controlled *(2)*	Hydraulic oils, fresh water, air, up to + 70 °C	**XMLB002A2S12**
Weight (kg)		1.015

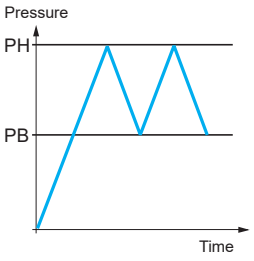
Complementary characteristics not shown under general characteristics (page 17)

Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	0.16 bar (2.32 psi)
	Min. at high setting *(3)*	0.21 bar (3.04 psi)
	Max. at high setting	1.75 bar (25.37 psi)
Maximum permissible pressure	Per cycle	5 bar (72.5 psi)
	Accidental	9 bar (130.5 psi)
Destruction pressure		18 bar (261 psi)
Mechanical life		8 x 10^6 operating cycles
Connection		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLB002A2S12** becomes **XMLB002A2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57.
(3) Deviation of the differential at low and high setting points for switches of the same size: - 0 03 bar, + 0 05 bar (- 0 43 psi, + 0 72 psi) .

Operating curves





1 Maximum differential
2 Minimum differential

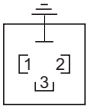
— Adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions	For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Electromechanical pressure switches

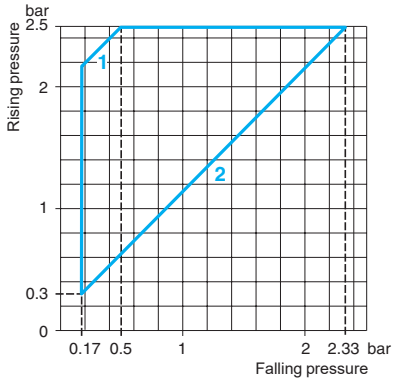
XM range, XML switches

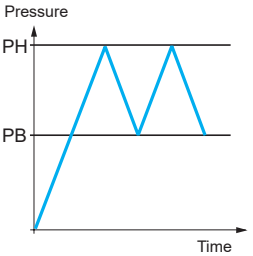
Size 2.5 bar (36.25 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 2 CO single-pole contacts

XMLC pressure switches		With setting scale	30 bar (435 psi) overpressure With setting scale	
				
Adjustable range of switching point (PH) (Rising pressure)		**0.3…2.5 bar (4.35…36.25 psi)**		
Electrical connection		Terminals		
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)
References *(1)*				
Fluids controlled *(2)*	Hydraulic oils, fresh water, air, up to + 160 °C	**XMLC002B2S12**	**XMLCS02B2S12**	**XMLCS02B2S13**
Weight (kg)		0.995	3.500	3.500
Complementary characteristics not shown under general characteristics (page 17)				
Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	0.13 bar (1.89 psi)	0.1 bar (1.45 psi)	
	Min. at high setting *(4)*	0.17 bar (2.47 psi)	0.18 bar (2.61 psi)	
	Max. at high setting	2 bar (29 psi)	1.25 bar (18.12 psi)	
Maximum permissible pressure	Per cycle	5 bar (72.5 psi)	30 bar (435 psi)	
	Accidental	9 bar (130.5 psi)	37.5 bar (543.75 psi)	
Destruction pressure		18 bar (261 psi)	67.5 bar (978.75 psi)	
Mechanical life		8 x 10^6 operating cycles	2 x 10^6 operating cycles	
Cable entry for terminal models		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm		

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLC002B2S12** becomes **XMLC002B2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57.
(3) Deviation of the differential at low setting point for switches of the same size: ± 0 02 bar (± 0 29 psi)
(4) Deviation of the differential at high setting point for switches of the same size: ± 0 03 bar (± 0 43 psi)

Operating curves

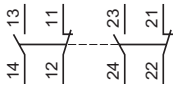




1 Maximum differential
2 Minimum differential
— Adjustable value

Connection

Terminal model



Other versions

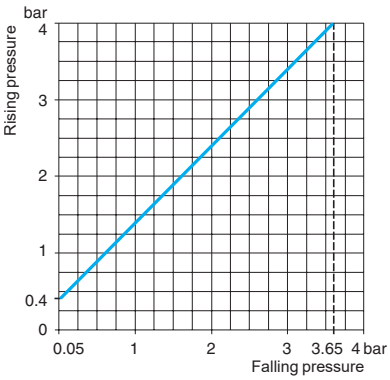
For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

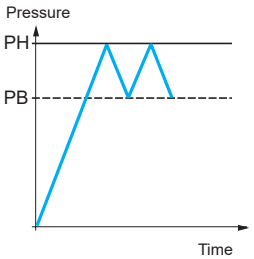
Electromechanical pressure switches
XM range, XML switches
Size 4 bar (58 psi)
Fixed differential, for detection of a single threshold
Switches with 1 CO single-pole contact

XMLA pressure switches		**With setting scale**		
				
Adjustable range of switching point (PH) (Rising pressure)		**0.4…4 bar (5.8…58 psi)**		
Electrical connection		DIN connector	Terminals	
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)
References *(1)*				
Fluids controlled *(2)*	Hydraulic oils, fresh water, air, up to + 70 °C	**XMLA004A2C11**	**XMLA004A2S12**	**XMLA004A2S13**
Weight (kg)		0.715	0.685	0.685
Complementary characteristics not shown under general characteristics (page 17)				
Natural differential (subtract from PH to give PB)	At low setting *(3)*	0.35 bar (5.07 psi)		
	At high setting *(3)*	0.35 bar (5.07 psi)		
Maximum permissible pressure	Per cycle	5 bar (72.5 psi)		
	Accidental	9 bar (130.5 psi)		
Destruction pressure		18 bar (261 psi)		
Mechanical life		8 x 10^6 operating cycles		
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm		

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLA004A2S12** becomes **XMLA004A2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0 03 bar (± 0 43 psi)

Operating curves





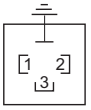
— Adjustable value
--- Non adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

Electromechanical pressure switches

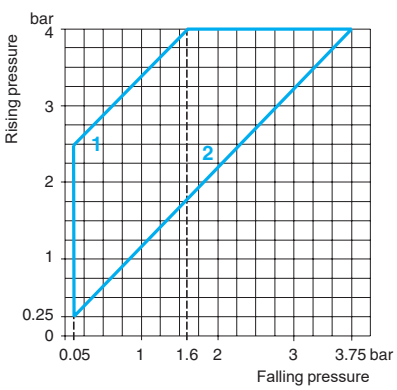
XM range, XML switches

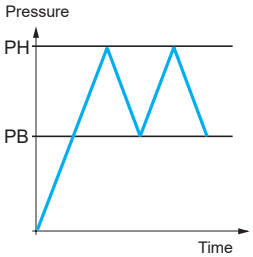
Size 4 bar (58 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 1 CO single-pole contact

XMLB pressure switches		**With setting scale**			**30 bar (435 psi) overpressure With setting scale**
					
Adjustable range of switching point (PH) (Rising pressure)		**0.25…4 bar (3.62…58 psi)**			
Electrical connection		DIN connector	Terminals		
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)	G 1/4 (female)
References *(1)*					
Fluids controlled *(2)*	Hydraulic oils, fresh water, air, up to + 70 °C	**XMLB004A2C11**	**XMLB004A2S12**	**XMLB004A2S13**	**–**
	Hydraulic oils, fresh water, air, up to + 160 °C	**–**	**–**	**–**	**XMLBS04B2S12**
	Corrosive fluids, up to + 160 °C	**XMLB004C2C11**	**–**	**–**	**–**
Weight (kg)		1.030	1.015	1.015	3.500
Complementary characteristics not shown under general characteristics (page 17)					
Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	0.2 bar (2.9 psi)			0.15 bar (2.18 psi)
	Min. at high setting *(4)*	0.25 bar (3.62 psi)			0.34 bar (4.93 psi)
	Max. at high setting	2.4 bar (34.8 psi)			2.46 bar (35.67 psi)
Maximum permissible pressure	Per cycle	5 bar (72.5 psi)			30 bar (435 psi)
	Accidental	9 bar (130.5 psi)			37.5 bar (543.75 psi)
Destruction pressure		18 bar (261 psi)			67.5 bar (978.75 psi)
Mechanical life		8 x 10^6 operating cycles			2 x 10^6 operating cycles
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm			

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLB004A2S12** becomes **XMLB004A2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low setting point for switches of the same size: ± 0 01 bar (± 0.14 psi).
(4) Deviation of the differential at high setting point for switches of the same size: - 0 03 bar, + 0 05 bar (- 0 43 psi, + 0 72 psi) .

Operating curves





1 Maximum differential
2 Minimum differential

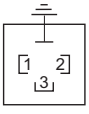
— Adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Electromechanical pressure switches

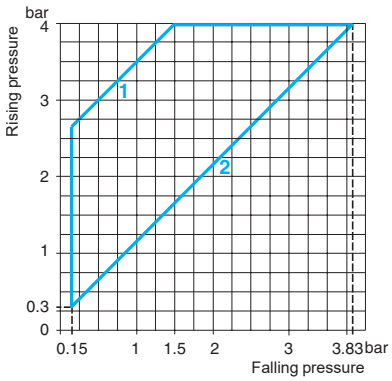
XM range, XML switches

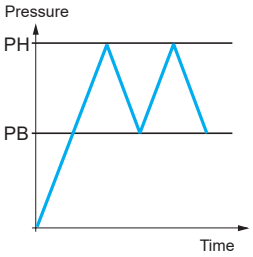
Size 4 bar (58 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 2 CO single-pole contacts

XMLC pressure switches	**With setting scale**	**30 bar (435 psi) overpressure With setting scale**
		
Adjustable range of switching point (PH) (Rising pressure)	**0.3…4 bar (4.35…58 psi)**	
Electrical connection	Terminals	
Fluid connection	G 1/4 (female)	G 1/4 (female)
References *(1)*		
Fluids controlled *(2)* — Hydraulic oils, fresh water, air, up to + 160 °C	**XMLC004B2S12**	**XMLCS04B2S12**
Weight (kg)	0.685	3.500
Complementary characteristics not shown under general characteristics (page 17)		
Possible differential (subtract from PH to give PB) — Min. at low setting *(3)*	0.15 bar (2.18 psi)	0.1 bar (1.45 psi)
Min. at high setting *(3)*	0.17 bar (2.47 psi)	0.25 bar (3.62 psi)
Max. at high setting	2.5 bar (36.25 psi)	2.20 bar (31.9 psi)
Maximum permissible pressure — Per cycle	5 bar (72.5 psi)	30 bar (435 psi)
Accidental	9 bar (130.5 psi)	37.5 bar (543.75 psi)
Destruction pressure	18 bar (261 psi)	67.5 bar (978.75 psi)
Mechanical life	8 x 10^6 operating cycles	2 x 10^6 operating cycles
Cable entry for terminal models	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type	Diaphragm	

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLC004B2S12** becomes **XMLC004B2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0 02 bar (± 0 29 psi) .

Operating curves

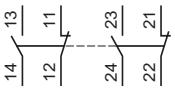




1 Maximum differential
2 Minimum differential
— Adjustable value

Connection

Terminal model



Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

Electromechanical pressure switches

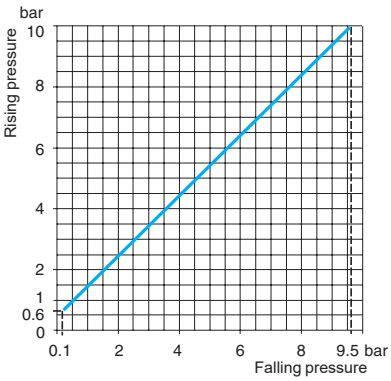
XM range, XML switches

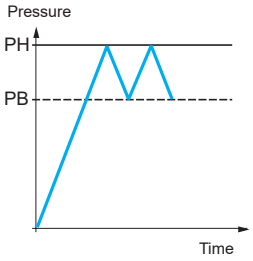
Size 10 bar (145 psi)
Fixed differential, for detection of a single threshold
Switches with 1 CO single-pole contact

XMLA pressure switches		**With setting scale**		
				
Adjustable range of switching point (PH) (Rising pressure)		**0.6…10 bar (8.7…145 psi)**		
Electrical connection		DIN connector	Terminals	Terminals
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)
References *(1)*				
Fluids controlled *(2)*	Hydraulic oils, fresh water, air, up to + 70 °C	**XMLA010A2C11**	**XMLA010A2S12**	**XMLA010A2S13**
Weight (kg)		0.715	0.685	0.685
Complementary characteristics not shown under general characteristics (page 17)				
Natural differential (subtract from PH to give PB)	At low setting *(3)*	0.5 bar (7.25 psi)		
	At high setting *(3)*	0.5 bar (7.25 psi)		
Maximum permissible pressure	Per cycle	12.5 bar (181.25 psi)		
	Accidental	22.5 bar (326.25 psi)		
Destruction pressure		45 bar (652.5 psi)		
Mechanical life		5 x 10^6 operating cycles		
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm		

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLA010A2S12** becomes **XMLA010A2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0.05 bar (± 0 72 psi)

Operating curves





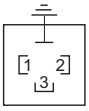
— Adjustable value
--- Non adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

Electromechanical pressure switches

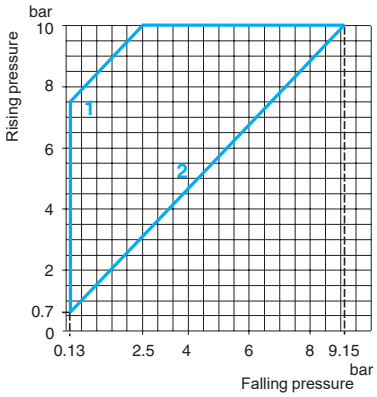
XM range, XML switches

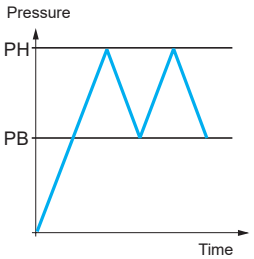
Size 10 bar (145 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 1 CO single-pole contact

XMLB pressure switches	**With setting scale**		
			
Adjustable range of switching point (PH) (Rising pressure)	**0.7…10 bar (10.15…145 psi)**		
Electrical connection	DIN connector	Terminals	Terminals
Fluid connection	G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)
References *(1)*			
Fluids controlled *(2)* — Hydraulic oils, fresh water, air, up to + 70 °C	**XMLB010A2C11**	**XMLB010A2S12**	**XMLB010A2S13**
Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C	**XMLB010C2C11**	**–**	**–**
Weight (kg)	0.735	0.705	0.705
Complementary characteristics not shown under general characteristics (page 17)			
Possible differential (subtract from PH to give PB) — Min. at low setting *(3)*	0.57 bar (8.26 psi)		
Min. at high setting *(4)*	0.85 bar (12.32 psi)		
Max. at high setting	7.5 bar (108.75 psi)		
Maximum permissible pressure — Per cycle	12.5 bar (181.25 psi)		
Accidental	22.5 bar (326.25 psi)		
Destruction pressure	45 bar (652.5 psi)		
Mechanical life	5 x 10^6 operating cycles		
Connection	EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm
Pressure switch type	Diaphragm		

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLB010A2S12** becomes **XMLB010A2S11** .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low setting point for switches of the same size: ± 0 05 bar (± 0 72 psi) .
(4) Deviation of the differential at high setting point for switches of the same size: - 0 1 bar, + 0 15 bar (- 1 45 psi, + 2 17 psi) .

Operating curves





1 Maximum differential
2 Minimum differential

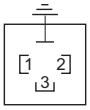
— Adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Electromechanical pressure switches
XM range, XML switches
Size 10 bar (145 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 2 CO single-pole contacts

XMLC pressure switches	**With setting scale**

Adjustable range of switching point (PH) (Rising pressure)		**0.7…10 bar (10.15…145 psi)**
Electrical connection		Terminals
Fluid connection		G 1/4 (female)

References *(1)*

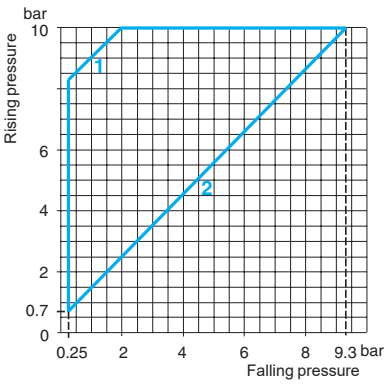
	Hydraulic oils, fresh water, air, up to + 160 °C	**XMLC010B2S12**
	Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C	**XMLC010C2S12**
Weight (kg)		0.685

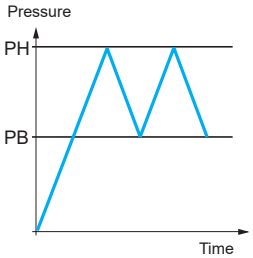
Complementary characteristics not shown under general characteristics (page 17)

Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	0.45 bar (6.53 psi)
	Min. at high setting *(4)*	0.70 bar (10.15 psi)
	Max. at high setting	8 bar (116 psi)
Maximum permissible pressure	Per cycle	12.5 bar (181.25 psi)
	Accidental	22.5 bar (326.25 psi)
Destruction pressure		45 bar (652.5 psi)
Mechanical life		5 x 10^6 operating cycles
Cable entry for terminal models		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLC010B2S12** becomes **XMLC010B2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low setting point for switches of the same size: ± 0 05 bar (± 0 72 psi)
(4) Deviation of the differential at high setting point for switches of the same size: ± 0 01 bar (± 1 45 psi)

Operating curves

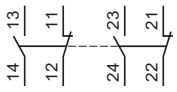




1 Maximum differential
2 Minimum differential
— Adjustable value

Connection

Terminal model



Other versions	For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

Electromechanical pressure switches

XM range, XML switches

Size 10 bar (145 psi)
Dual stage, fixed differential, for detection at each threshold
With 2 CO single-pole contacts

XMLD pressure switches | **Without setting scale**

Adjustable range of each switching point (Rising pressure)	2nd stage switching point (PH2)	**1.2…10 bar (17.4…145 psi)**
	1st stage switching point (PH1)	**0.52…9.32 bar (7.54…135.14 psi)**
Spread between 2 stages (PH2 - PH1)		**0.68…5.8 bar (9.86…84.1 psi)**
Fluid connection		G 1/4 (female)
Electrical connection		Terminals

References

Fluids controlled *(1)*	Hydraulic oils, fresh water, air, up to + 160 °C	**XMLD010B1S11**
Weight (kg)		0.705

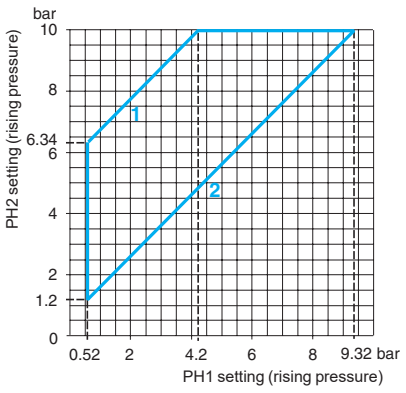
Complementary characteristics not shown under general characteristics (page 17)

Natural differential (subtract from PH1/PH2 to give PB1/PB2)	At low setting *(2)*	0.45 bar (6.53 psi)
	At high setting *(3)*	0.6 bar (8.7 psi)
Maximum permissible pressure	Per cycle	12.5 bar (181.25 psi)
	Accidental	22.5 bar (326.25 psi)
Destruction pressure		45 bar (652.5 psi)
Mechanical life		5 x 10^6 operating cycles
Cable entry for terminal models		1 entry tapped for no. 13 cable gland
Pressure switch type		Diaphragm

(1) For component materials of units in contact with the fluid, see page 57 .
(2) Deviation of the differential at low setting point for switches of the same size: ± 0 05 bar (± 0 72 psi)
(3) Deviation of the differential at high setting point for switches of the same size: ± 0 1 bar (± 1 45 psi)

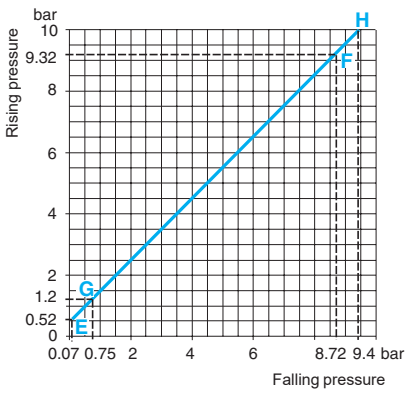
Operating curves

High setting tripping points of contacts 1 and 2

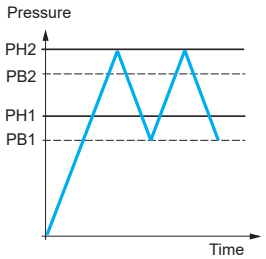


1 Maximum differential
2 Minimum differential

Natural differential of contacts 1 and 2



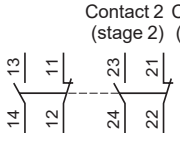
EF Contact 1 (stage 1)
GH Contact 2 (stage 2)



— Adjustable value
--- Non adjustable value

Connection

Terminal model



Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Electromechanical pressure switches

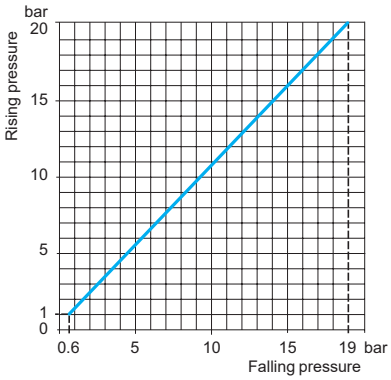
XM range, XML switches

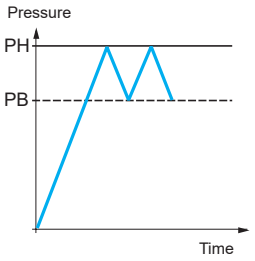
Size 20 bar (290 psi)
Fixed differential, for detection of a single threshold
With 1 CO single-pole contact

XMLA pressure switches		With setting scale		
				
Adjustable range of switching point (PH) (Rising pressure)		**1…20 bar (14.5…290 psi)**		
Electrical connection		DIN connector	Terminals	
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)
References *(1)*				
Fluids controlled *(2)*	Hydraulic oils, fresh water, air, up to + 70 °C	**XMLA020A2C11**	**XMLA020A2S12**	**XMLA020A2S13**
	Hydraulic oils, fresh water, air, up to + 160 °C	**XMLA020B2C11**	**XMLA020B2S12**	**–**
	Viscous products, up to + 160 °C (G 1¼" fluid connection)	**–**	**XMLA020P2S12**	**–**
Weight (kg)		0.715	0.685	0.685
Complementary characteristics not shown under general characteristics (page 17)				
Natural differential (subtract from PH to give PB)	At low setting *(3)*	0.4 bar (5.8 psi)		
	At high setting *(3)*	1 bar (14.5 psi)		
Maximum permissible pressure	Per cycle	25 bar (362.5 psi)		
	Accidental	45 bar (652.5 psi)		
Destruction pressure		90 bar (1305 psi)		
Mechanical life		5 x 10^6 operating cycles		
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm		

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLA020A2S12** becomes **XMLA020A2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at high setting point for switches of the same size:
± 0 .1 bar (± 1 .45 psi)
Deviation of the differential at low setting point: ± 0.2 bar (± 2.9 psi)

Operating curves





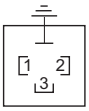
— Adjustable value
--- Non adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

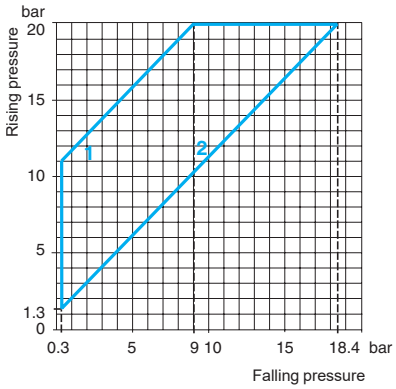
Electromechanical pressure switches
XM range, XML switches
Size 20 bar (290 psi)
Adjustable differential, for regulation between 2 thresholds
With 1 CO single-pole contact

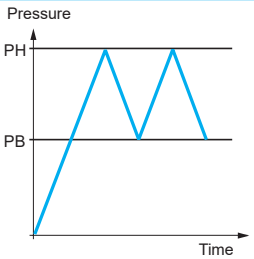
XMLB pressure switches	**With setting scale**

Adjustable range of switching point (PH) (Rising pressure)		**1.3…20 bar (18.9…290 psi)**	
Electrical connection		Terminals	
Fluid connection		G 1/4 (female)	1/4”-18 NPTF (female)
References *(1)*			
Fluids controlled *(2)*	Hydraulic oils, fresh water, air, up to + 70 °C	**XMLB020A2S12**	**XMLB020A2S13**
	Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C	**XMLB020C2S12**	**–**
Weight (kg)		0.705	0.705
Complementary characteristics not shown under general characteristics (page 17)			
Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	1 bar (14.5 psi)	
	Min. at high setting *(3)*	1.6 bar (23.20 psi)	
	Max. at high setting	11 bar (159.5 psi)	
Maximum permissible pressure	Per cycle	25 bar (362.5 psi)	
	Accidental	45 bar (652.5 psi)	
Destruction pressure		90 bar (1305 psi)	
Mechanical life		5 x 10^6 operating cycles	
Connection		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	1 entry tapped 1/2”-14 NPT for cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm	

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLB020A2S12** becomes **XMLB020A2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0 25 bar (± 3 63 psi)

Operating curves





1 Maximum differential
2 Minimum differential

— Adjustable value

Connection
Terminal model

Other versions	For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Electromechanical pressure switches

XM range, XML switches

Size 20 bar (290 psi)
Adjustable differential, for regulation between 2 thresholds
With 2 CO single-pole contacts

XMLC pressure switches	**With setting scale**

Adjustable range of switching point (PH) (Rising pressure)		**1.3…20 bar (18.85…290 psi)**
Electrical connection		Terminals
Fluid connection		G 1/4 (female)

References *(1)*

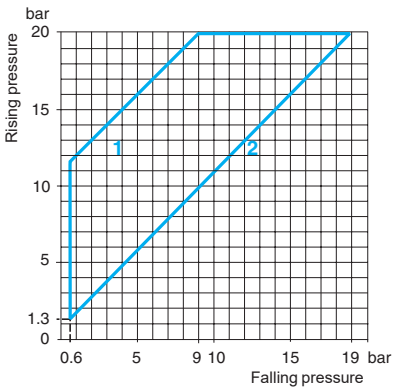
	Hydraulic oils, fresh water, air, up to + 160 °C	**XMLC020B2S12**
Weight (kg)		0.685

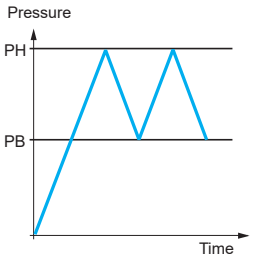
Complementary characteristics not shown under general characteristics (page 17)

Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	0.7 bar (10.15 psi)
	Min. at high setting *(3)*	1 bar (14.5 psi)
	Max. at high setting	11 bar (159.5 psi)
Maximum permissible pressure	Per cycle	25 bar (362.5 psi)
	Accidental	45 bar (652.5 psi)
Destruction pressure		90 bar (1305 psi)
Mechanical life		5 x 10^6 operating cycles
Cable entry for terminal models		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLC020B2S12** becomes **XMLC020B2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0 2 bar (± 2 9 psi)

Operating curves



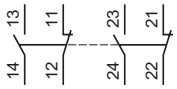


1 Maximum differential
2 Minimum differential

— Adjustable value

Connection

Terminal model



Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

Electromechanical pressure switches

XM range, XML switches

Size 20 bar (290 psi)
Dual stage, fixed differential, for detection at each threshold
Switches with 2 CO single-pole contacts

XMLD pressure switches		**Without setting scale**

Adjustable range of each switching point (Rising pressure)	2nd stage switching point (PH2)	**2.14…20 bar (31.03…290 psi)**
	1st stage switching point (PH1)	**0.9…18.76 bar (13.05…272.02 psi)**
Spread between 2 stages (PH2 - PH1)		**1.24…9.55 bar (17.98…138.48 psi)**
Electrical connection		Terminals
Fluid connection		G 1/4 (female)

References *(1)*

	Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C	**XMLD020C1S12**
Weight (kg)		0.705

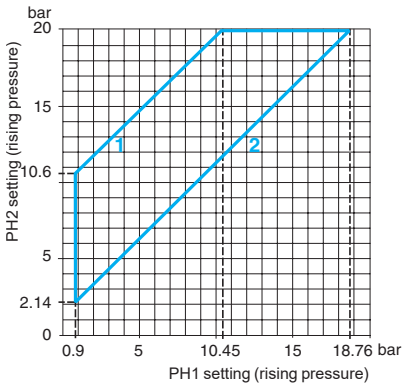
Complementary characteristics not shown under general characteristics (page 17)

Natural differential (subtract from PH1/PH2 to give PB1/PB2)	At low setting *(3)*	0.7 bar (10.15 psi)
	At high setting *(4)*	1.3 bar (18.85 psi)
Maximum permissible pressure	Per cycle	25 bar (362.5 psi)
	Accidental	45 bar (652.5 psi)
Destruction pressure		90 bar (1305 psi)
Mechanical life		5 x 10^6 operating cycles
Cable entry for terminal models		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLD020B1S12** becomes **XMLD020B1S11**) .*
(2) For component materials of units in contact with the fluid,see page 57 .
(3) Deviation of the differential at low setting point for switches of the same size: ± 0 .15 bar (± 2 .18 psi)
(4) Deviation of the differential at high setting point for switches of the same size: ± 0 .3 bar (± 4 .35 psi)

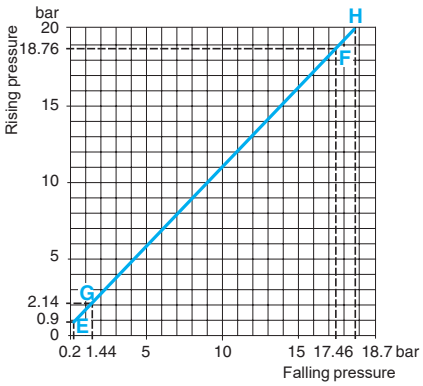
Operating curves

High setting tripping points of contacts 1 and 2

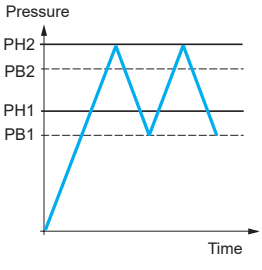


1 Maximum differential
2 Minimum differential

Natural differential of contacts 1 and 2



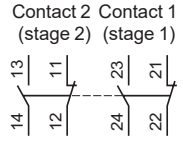
EF Contact 1 (stage 1)
GH Contact 2 (stage 2)



— Adjustable value
--- Non adjustable value

Connection model

Terminal model



Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Electromechanical pressure switches

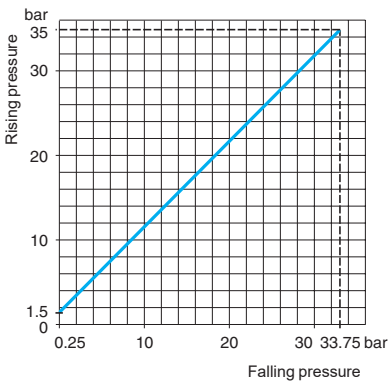
XM range, XML switches

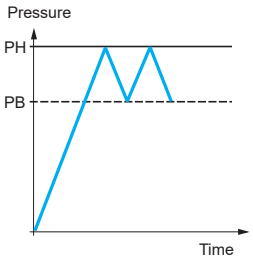
Size 35 bar (507.5 psi)
Fixed differential, for detection of a single threshold
Switches with 1 CO single-pole contact

XMLA pressure switches		With setting scale	
			
Adjustable range of switching point (PH) (Rising pressure)		**1.5…35 bar (21.75…507.5 psi)**	
Electrical connection		DIN connector	Terminals
Fluid connection		G 1/4 (female)	G 1/4 (female)
References *(1)*			
Fluids controlled *(2)*	Hydraulic oils, fresh water, air, up to + 70 °C	**XMLA035A2C11**	**XMLA035A2S12**
	Hydraulic oils, fresh water, air, up to + 160 °C	**XMLA035B2C11**	**–**
	Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C	**XMLA035C2C11**	**–**
Weight (kg)		0.725	0.695
Complementary characteristics not shown under general characteristics (page 17)			
Natural differential (subtract from PH to give PB)	At low setting *(3)*	1.25 bar (18.12 psi)	
	At high setting *(3)*	1.25 bar (18.12 psi)	
Maximum permissible pressure	Per cycle	45 bar (652.5 psi)	
	Accidental	80 bar (1160 psi)	
Destruction pressure		160 bar (2320 psi)	
Mechanical life		5 x 10^6 operating cycles	
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm	

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLA035A2S12** becomes **XMLA035A2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0 25 bar (± 3 62 psi)

Operating curves





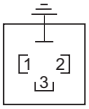
— Adjustable value
--- Non adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Electromechanical pressure switches

XM range, XML switches

Size 35 bar (507.5 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 1 CO single-pole contact

XMLB pressure switches	With setting scale

Adjustable range of switching point (PH) (Rising pressure)	**3.5…35 bar (50.75…507.5 psi)**
Electrical connection	DIN connector
Fluid connection	G 1/4 (female)

References *(1)*

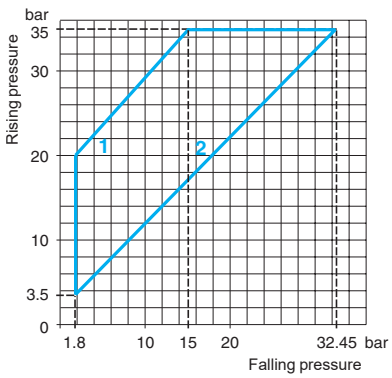
Fluids controlled *(2)*	Hydraulic oils, fresh water, air, up to + 70 °C	**XMLB035A2C11**
Weight (kg)		0.745

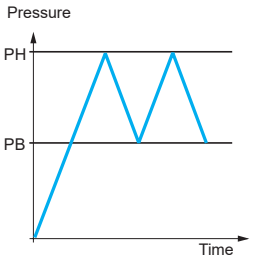
Complementary characteristics not shown under general characteristics (page 17)

Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	1.7 bar (24.65 psi)
	Min. at high setting *(3)*	2.55 bar (36.97 psi)
	Max. at high setting	20 bar (290 psi)
Maximum permissible pressure	Per cycle	45 bar (652.5 psi)
	Accidental	80 bar (1160 psi)
Destruction pressure		160 bar (2320 psi)
Mechanical life		5 x 10^6 operating cycles
Connection		EN 175301-803-A connector (ex-DIN 43650A), 4-pin male. For suitable female connector, see page 52
Pressure switch type		Diaphragm

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLB035A2S12** becomes **XMLB035A2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low and high setting points for switches of the same size: - 0 5 bar, + 0 7 bar (- 7 25 psi, + 10 15 psi) .

Operating curves





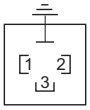
1 Maximum differential
2 Minimum differential

— Adjustable value

Connection

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Electromechanical pressure switches

XM range, XML switches

Size 35 bar (507.5 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 2 CO single-pole contacts

XMLC pressure switches	With setting scale

Adjustable range of switching point (PH) (Rising pressure)	**3.5…35 bar (50.75…507.5 psi)**
Electrical connection	Terminals
Fluid connection	G 1/4 (female)

References *(1)*

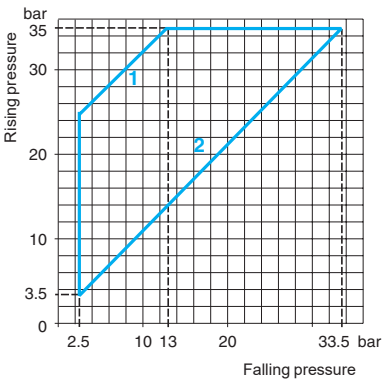
Fluids controlled *(2)*	Hydraulic oils, fresh water, air, up to + 160 °C	**XMLC035B2S12**
	Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C	**XMLC035C2S12**
Weight (kg)		0.695

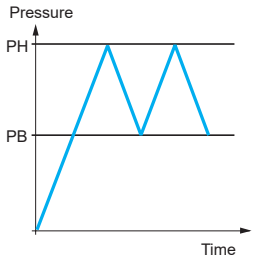
Complementary characteristics not shown under general characteristics (page 17)

Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	1 bar (14.5 psi)
	Min. at high setting *(4)*	1.5 bar (21.75 psi)
	Max. at high setting	22 bar (319 psi)
Maximum permissible pressure	Per cycle	45 bar (652.5 psi)
	Accidental	80 bar (1160 psi)
Destruction pressure		160 bar (2320 psi)
Mechanical life		5 x 10^6 operating cycles
Cable entry for terminal models		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Diaphragm

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLC035B2S12** becomes **XMLC035B2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low setting point for switches of the same size: ± 0 2 bar (± 2 9 psi)
(4) Deviation of the differential at high setting point for switches of the same size: ± 0 5 bar (± 7 25 psi)

Operating curves



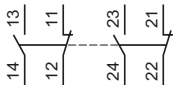


1 Maximum differential
2 Minimum differential

— Adjustable value

Connection

Terminal model



Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

Electromechanical pressure switches

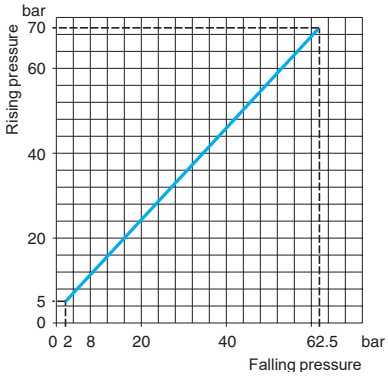
XM range, XML switches

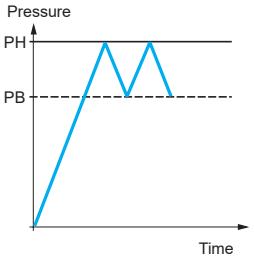
Size 70 bar (1015 psi)
Fixed differential, for detection of a single threshold
Switches with 1 CO single-pole contact

XMLA pressure switches		With setting scale		
				
Adjustable range of switching point (PH) (Rising pressure)		**5…70 bar (72.5…1015 psi)**		
Electrical connection		DIN connector	Terminals	
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)
References *(1)*				
Fluids controlled *(2)*	Hydraulic oils, up to + 160 °C	**XMLA070D2C11**	**XMLA070D2S12**	**XMLA070D2S13**
	Fresh water, up to + 160 °C	**–**	**–**	**XMLA070E2S13**
	Corrosive fluids, air, up to + 160 °C	**–**	**XMLA070N2S12**	**–**
Weight (kg)		0.725	0.695	0.695
Complementary characteristics not shown under general characteristics (page 17)				
Natural differential (subtract from PH to give PB)	At low setting *(3)*	3 bar (43.5 psi)		
	At high setting *(3)*	9.5 bar (137.75 psi)		
Maximum permissible pressure	Per cycle	90 bar (1035 psi)		
	Accidental	160 bar (2320 psi)		
Destruction pressure		320 bar (4640 psi)		
Mechanical life		6 x 10^6 operating cycles		
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Piston		

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLA070D2S12** becomes **XMLA070D2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low and high setting points for switches of the same size: ± 1 bar (± 14 5 psi)

Operating curves





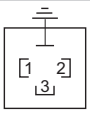
— Adjustable value
--- Non adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

Electromechanical pressure switches

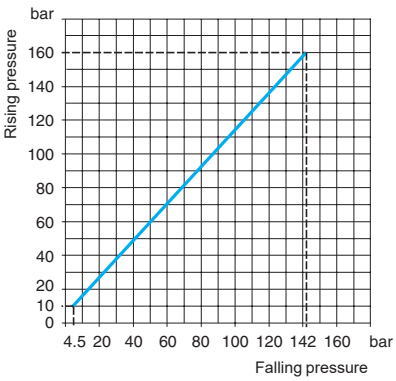
XM range, XML switches

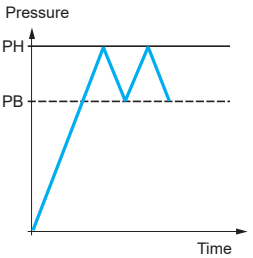
Size 160 bar (2320 psi)
Fixed differential, for detection of a single threshold
Switches with 1 CO single-pole contact

XMLA pressure switches		**With setting scale**		
				
Adjustable range of switching point (PH) (Rising pressure)		**10…160 bar (145…2320 psi)**		
Electrical connection		DIN connector	Terminals	
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)
References *(1)*				
Fluids controlled *(2)*	Hydraulic oils, up to + 160 °C	**XMLA160D2C11**	**XMLA160D2S12**	**XMLA160D2S13**
	Corrosive fluids, air, up to + 160 °C	**XMLA160N2C11**	**–**	**–**
Weight (kg)		0.780	0.750	0.750
Complementary characteristics not shown under general characteristics (page 17)				
Natural differential (subtract from PH to give PB)	At low setting *(3)*	5.5 bar (79.75 psi)		
	At high setting *(4)*	18 bar (261 psi)		
Maximum permissible pressure	Per cycle	200 bar (2900 psi)		
	Accidental	360 bar (5220 psi)		
Destruction pressure		720 bar (10,440 psi)		
Mechanical life		6 x 10^6 operating cycles		
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Piston		

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLA160D2S12** becomes **XMLA160D2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low setting point for switches of the same size: ± 1 bar (± 14 5 psi)
(4) Deviation of the differential at high setting point for switches of the same size: ± 3 bar (± 43 5 psi)

Operating curves





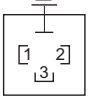
— Adjustable value
--- Non adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

Electromechanical pressure switches

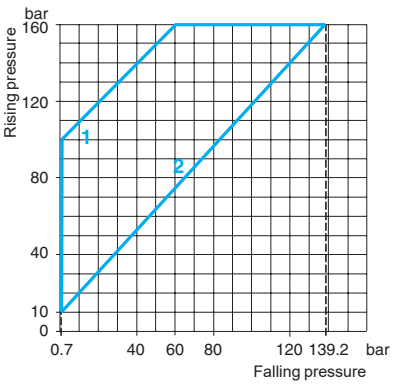
XM range, XML switches

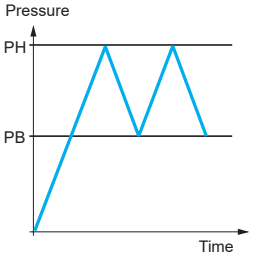
Size 160 bar (2320 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 1 CO single-pole contact

XMLB pressure switches		**With setting scale**	
			
Adjustable range of switching point (PH) (Rising pressure)		**10…160 bar (145…2320 psi)**	
Electrical connection		DIN connector	Terminals
Fluid connection		G 1/4 (female)	G 1/4 (female)
References *(1)*			
Fluids controlled *(2)*	Hydraulic oils, up to + 160 °C	**XMLB160D2C11**	**XMLB160D2S12**
Weight (kg)		0.780	0.750
Complementary characteristics not shown under general characteristics (page 17)			
Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	9.3 bar (134.85 psi)	
	Min. at high setting *(4)*	20.8 bar (301.6 psi)	
	Max. at high setting	100 bar (1450 psi)	
Maximum permissible pressure	Per cycle	200 bar (2900 psi)	
	Accidental	360 bar (5220 psi)	
Destruction pressure		720 bar (10,440 psi)	
Mechanical life		6 x 10^6 operating cycles	
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Piston	

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLB160D2S12** becomes **XMLB160D2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low setting point for switches of the same size: - 1 8 bar, + 1 5 bar (- 26 1 psi, + 21 75 psi) .
(4) Deviation of the differential at high setting point for switches of the same size: - 1 9 bar, + 1 6 bar (- 27 55 psi, + 23 2 psi) .

Operating curves





1 Maximum differential
2 Minimum differential

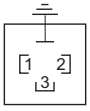
— Adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Electromechanical pressure switches
XM range, XML switches
Size 160 bar (2320 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 2 CO single-pole contacts

XMLC pressure switches	**With setting scale**

Adjustable range of switching point (PH) (Rising pressure)	**12…160 bar (174…2320 psi)**
Electrical connection	Terminals
Fluid connection	G 1/4 (female)

References *(1)*

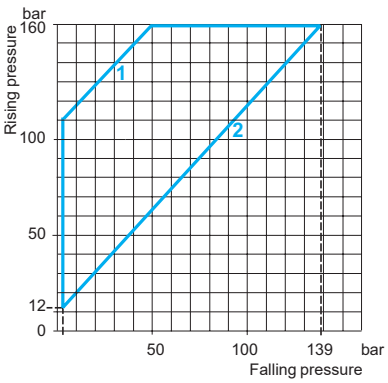
Fluids controlled *(2)*	Hydraulic oils, up to + 160 °C	**XMLC160D2S12**
Weight (kg)		0.750

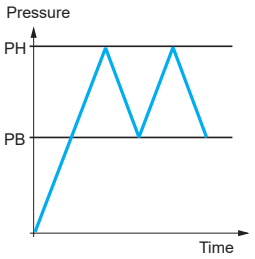
Complementary characteristics not shown under general characteristics (page 17)

Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	9 bar (130.5 psi)
	Min. at high setting *(3)*	21 bar (304.5 psi)
	Max. at high setting	110 bar (1590 psi)
Maximum permissible pressure	Per cycle	200 bar (2900 psi)
	Accidental	360 bar (5220 psi)
Destruction pressure		720 bar (10 440 psi)
Mechanical life		6 x 10^6 operating cycles
Cable entry for terminal models		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Piston

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLC160D2S12** becomes **XMLC160D2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0 9 bar (± 13 05 psi)

Operating curves



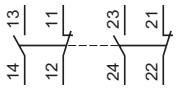


1 Maximum differential
2 Minimum differential

— Adjustable value

Connection

Terminal model



Other versions	For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

Electromechanical pressure switches

XM range, XML switches

Sze 160 bar (2320 psi)
Dual stage, fixed differential, for detection at each threshold
Switches with 2 CO single-pole contacts

XMLD pressure switches		**Without setting scale**
		
Adjustable range of each switching point (Rising pressure)	2nd stage switching point (PH2)	**16.5…160 bar (239.25…2320 psi)**
	1st stage switching point (PH1)	**10.5…154 bar (152.25…2233 psi)**
Spread between 2 stages (PH2 - PH1)		**6…83 bar (87…1203.5 psi)**
Electrical connection		Terminals
Fluid connection		1/4"-18 NPTF (female)

References *(1)*

Fluids controlled *(2)*	Hydraulic oils, up to + 160 °C	**XMLD160D1S13**
Weight (kg)		0.750

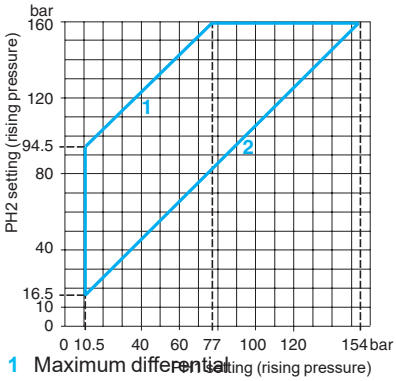
Complementary characteristics not shown under general characteristics (page 17)

Natural differential (subtract from PH1/PH2 to give PB1/PB2)	At low setting *(3)*	8.8 bar (127.6 psi)
	At high setting *(4)*	20 bar (290 psi)
Maximum permissible pressure	Per cycle	200 bar (2900 psi)
	Accidental	360 bar (5220 psi)
Destruction pressure		720 bar (10,440 psi)
Mechanical life		6 x 10^6 operating cycles
Cable entry for terminal models		1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Piston

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLD160D1S12** becomes **XMLD160D1S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low setting point for switches of the same size: ± 1 5 bar (± 21 75 psi)
(4) Deviation of the differential at high setting point for switches of the same size: ± 7 bar (± 101 5 psi)

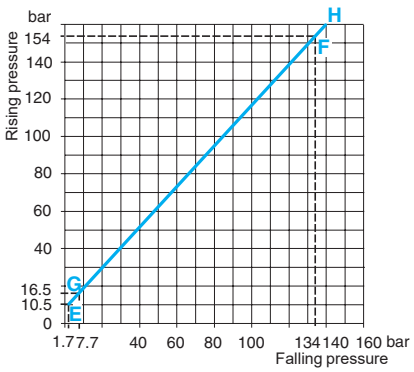
Operating curves

High setting tripping points of contacts 1 and 2

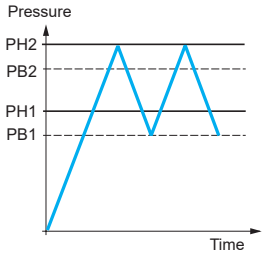


1 Maximum differential
2 Minimum differential

Natural differential of contacts 1 and 2



EF Contact 1 (stage 1)
GH Contact 2 (stage 2)

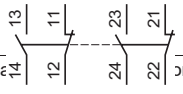


— Adjustable value
--- Non adjustable value

Connection

Terminal model

Contact 2 (stage 2) Contact 1 (stage 1)



Other versions For pressure switches with alternative tapped cable entries, such as , consult our Customer Care Centre.

Electromechanical pressure switches

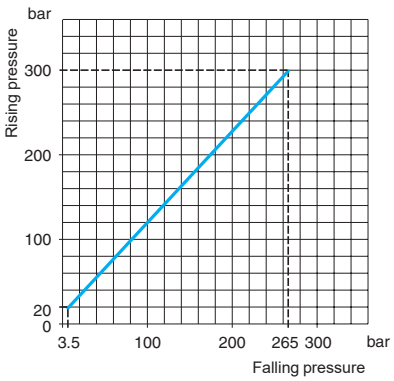
XM range, XML switches

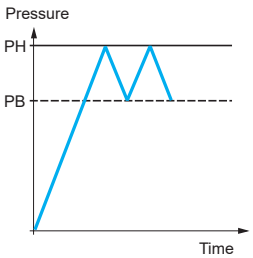
Size 300 bar (4350 psi)
Fixed differential, for detection of a single threshold
Switches with 1 CO single-pole contact

XMLA pressure switches		**With setting scale**		
				
Adjustable range of switching point (PH) (Rising pressure)		**20…300 bar (290…4350 psi)**		
Electrical connection		DIN connector	Terminals	
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)
References *(1)*				
Fluids controlled *(2) (5)*	Hydraulic oils, up to + 160 °C	**XMLA300D2C11**	**XMLA300D2S12**	**XMLA300D2S13**
	Fresh water, up to + 160 °C	**–**	**XMLA300E2S12**	**–**
Weight (kg)		0.780	0.750	0.750
Complementary characteristics not shown under general characteristics (page 17)				
Natural differential (subtract from PH to give PB)	At low setting *(3)*	16.5 bar (239.25 psi)		
	At high setting *(4)*	35 bar (507.5 psi)		
Maximum permissible pressure	Per cycle	375 bar (5437.5 psi)		
	Accidental	675 bar (9787.5 psi)		
Destruction pressure		1350 bar (19 575 psi)		
Mechanical life		3 x 10^6 operating cycles		
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Piston		

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLA300D2S12** becomes **XMLA300D2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low setting point for switches of the same size: ± 3 bar (± 43 5 psi)
(4) Deviation of the differential at high setting point for switches of the same size: ± 6 bar (± 87 psi)
(5) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

Operating curves





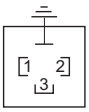
— Adjustable value
--- Non adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

Electromechanical pressure switches

XM range, XML switches

Size 300 bar (4350 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 1 CO single-pole contact

XMLB pressure switches | **With setting scale**

Adjustable range of switching point (PH) (Rising pressure)	**22…300 bar (319…4350 psi)**		
Electrical connection	DIN connector	Terminals	
Fluid connection	G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)

References *(1)*

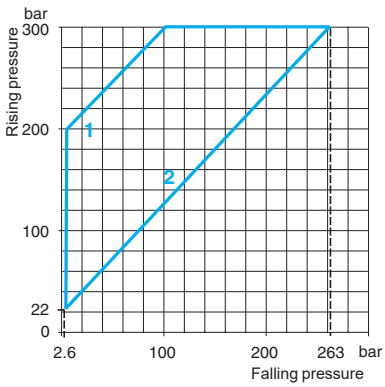
Fluids controlled *(2)(5)*	Hydraulic oils, up to + 160 °C	**XMLB300D2C11**	**XMLB300D2S12**	**XMLB300D2S13**
	Corrosive fluids, air, up to + 160 °C	–	**XMLB300N2S12**	–
Weight (kg)		0.780	0.750	0.750

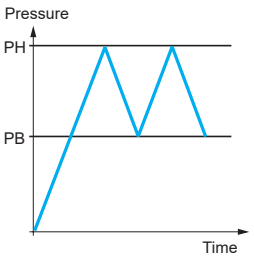
Complementary characteristics not shown under general characteristics (page 17)

Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	19.4 bar (281.3 psi)		
	Min. at high setting *(4)*	37 bar (536.5 psi)		
	Max. at high setting	200 bar (2900 psi)		
Maximum permissible pressure	Per cycle	375 bar (5437.5 psi)		
	Accidental	675 bar (9787.5 psi)		
Destruction pressure		1350 bar (19,575 psi)		
Mechanical life		3 x 10^6 operating cycles		
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Piston		

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLB300D2S12** becomes **XMLB300D2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low setting point for switches of the same size: - 1 5 bar, + 1 7 bar (- 21 75 psi, + 24 65 psi) .
(4) Deviation of the differential at high setting point for switches of the same size: - 1 bar, + 4 bar (- 14 5 psi, + 58 psi) .
(5) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

Operating curves





1 Maximum differential
2 Minimum differential

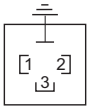
— Adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Electromechanical pressure switches

XM range, XML switches

Size 300 bar (4350 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 2 CO single-pole contacts

XMLC pressure switches	**With setting scale**

Adjustable range of switching point (PH) (Rising pressure)		**22…300 bar (319…4350 psi)**
Electrical connection		Terminals
Fluid connection		G 1/4 (female)

References *(1)*

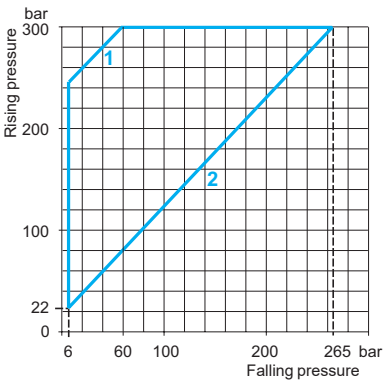
Fluids controlled *(2) (4)*	Hydraulic oils, up to + 160 °C	**XMLC300D2S12**
Weight (kg)		0.750

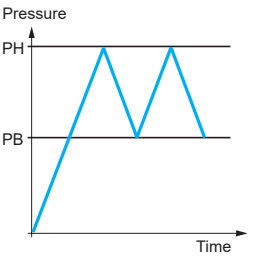
Complementary characteristics not shown under general characteristics (page 17)

Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	16 bar (232 psi)
	Min. at high setting *(3)*	35 bar (507.5 psi)
	Max. at high setting	240 bar (3480 psi)
Maximum permissible pressure	Per cycle	375 bar (5437.5 psi)
	Accidental	675 bar (9787.5 psi)
Destruction pressure		1350 bar (19 575 psi)
Mechanical life		3 x 10^6 operating cycles
Cable entry for terminal models		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Piston

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLC300D2S12** becomes **XMLC300D2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0 9 bar (± 13 05 psi)
(4) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

Operating curves



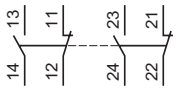


1 Maximum differential
2 Minimum differential

— Adjustable value

Connection

Terminal model



Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

Electromechanical pressure switches

XM range, XML switches

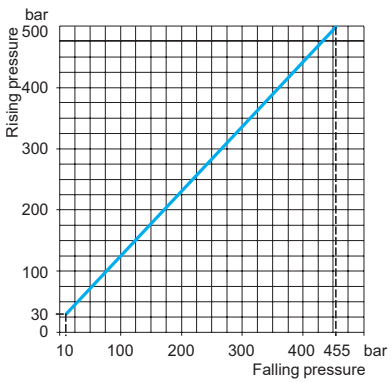
Size 500 bar (7250 psi)
Fixed differential, for detection of a single threshold
Switches with 1 CO single-pole contact

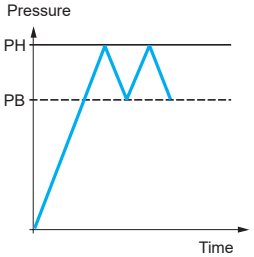
XMLA pressure switches | **With setting scale**

Adjustable range of switching point (PH) (Rising pressure)	**30…500 bar (435…7250 psi)**		
Electrical connection	DIN connector	Terminals	
Fluid connection	G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)
References *(1)*			
Fluids controlled *(2) (5)* — Hydraulic oils, up to + 160 °C	–	**XMLA500D2S12**	**XMLA500D2S13**
Corrosive fluids, air, up to + 160 °C	**XMLA500N2C11**	–	–
Weight (kg)	0.780	0.750	0.750
Complementary characteristics not shown under general characteristics (page 17)			
Natural differential (subtract from PH to give PB) — At low setting *(3)*	20 bar (290 psi)		
At high setting *(4)*	45 bar (652.5 psi)		
Maximum permissible pressure — Per cycle	625 bar (9062.5 psi)		
Accidental	1125 bar (16,312.5 psi)		
Destruction pressure	2250 bar (32,625 psi)		
Mechanical life	3 x 10^6 operating cycles		
Connection	EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm
Pressure switch type	Piston		

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLA500D2S12** becomes **XMLA500D2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low setting point for switches of the same size: ± 6 bar (± 87 psi)
(4) Deviation of the differential at high setting point for switches of the same size: ± 10 bar (± 145 psi)
(5) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

Operating curves





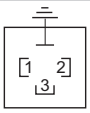
— Adjustable value
--- Non adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 52
Dimensions: page 53

Electromechanical pressure switches

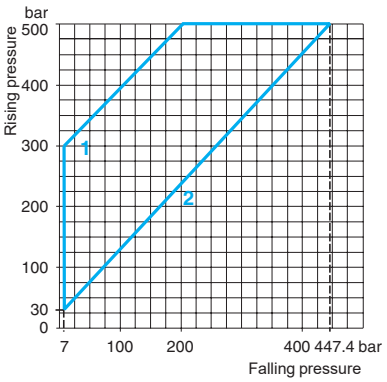
XM range, XML switches

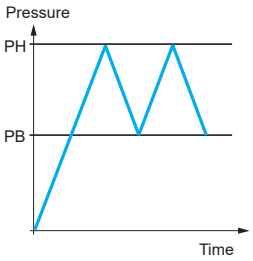
Size 500 bar (7250 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 1 CO single-pole contact

XMLB pressure switches		**With setting scale**	
			
Adjustable range of switching point (PH) (Rising pressure)		**30…500 bar (435…7250 psi)**	
Electrical connection		DIN connector	Terminals
Fluid connection		G 1/4 (female)	G 1/4 (female)
References *(1)*			
Fluids controlled *(2) (5)*	Hydraulic oils, up to + 160 °C	**XMLB500D2C11**	**XMLB500D2S12**
	Corrosive fluids, air, up to + 160 °C	**XMLB500N2C11**	**XMLB500N2S12**
Weight (kg)		0.780	0.750
Complementary characteristics not shown under general characteristics (page 17)			
Possible differential (subtract from PH to give PB)	Min. at low setting *(3)*	23 bar (333.5 psi)	
	Min. at high setting *(4)*	52.6 bar (762.7 psi)	
	Max. at high setting	300 bar (4350 psi)	
Maximum permissible pressure	Per cycle	625 bar (9062.5 psi)	
	Accidental	1125 bar (16,312.5 psi)	
Destruction pressure		2250 bar (32,625 psi)	
Mechanical life		3 x 10^6 operating cycles	
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 52	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Pressure switch type		Piston	

*(1) For 1 entry tapped for no .13 cable gland, replace **S12** with **S11** (for example, **XMLB500D2S12** becomes **XMLB500D2S11**) .*
(2) For component materials of units in contact with the fluid, see page 57 .
(3) Deviation of the differential at low setting point for switches of the same size: - 2 6 bar, + 3 8 bar (- 37 7 psi, + 55 1 psi) .
(4) Deviation of the differential at high setting point for switches of the same size: - 14 8 bar, + 11 2 bar (- 214 6 psi, + 162 4 psi) .
(5) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

Operating curves





1 Maximum differential
2 Minimum differential

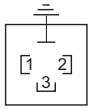
— Adjustable value

Connection

Terminal model

Connector model

Pressure switch connector pin view



1 → 11 and 13
2 → 12
3 → 14

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

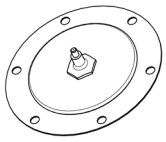
Electromechanical pressure and vacuum switches

XMLA, XMLB, XMLC and XMLD switches

Accessories and replacement parts

XMLZL001

XZCC43FCP40B



XMLZL01●

Accessories for pressure switches and vacuum switches

Description	Specific characteristics	For use with switches	Unit reference	Weight kg
Lead sealable protective cover to prevent unauthorised access to adjustment screws and fixing screw of switch cover	–	XMLA XMLB	**XMLZL001**	0.035
Female EN 175301-803-A connector (ex-DIN 43650A)	–	XML●●●●●●C11	**XZCC43FCP40B**	0.035

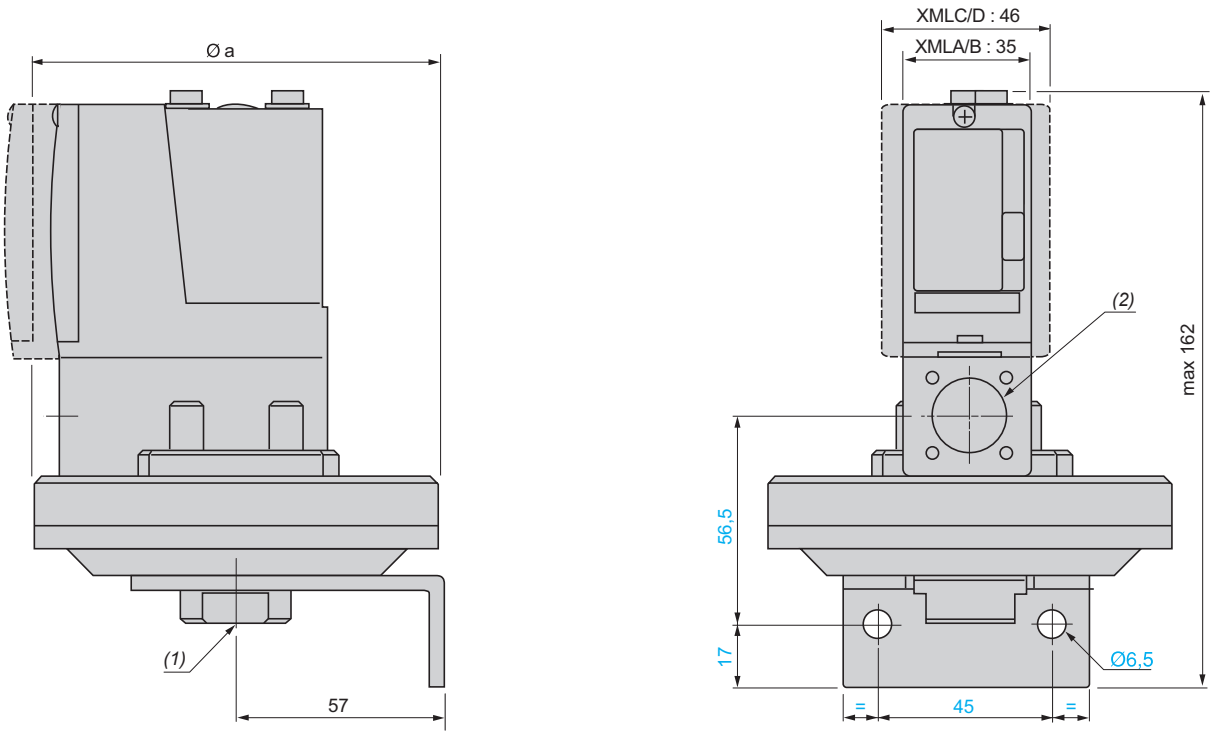
Replacement parts

Diaphragms	–	XML●S35	**XMLZL013**	0.060
		XML●S02	**XMLZL014**	0.040

Electromechanical pressure and vacuum switches

XMLA, XMLB, XMLC and XMLD switches

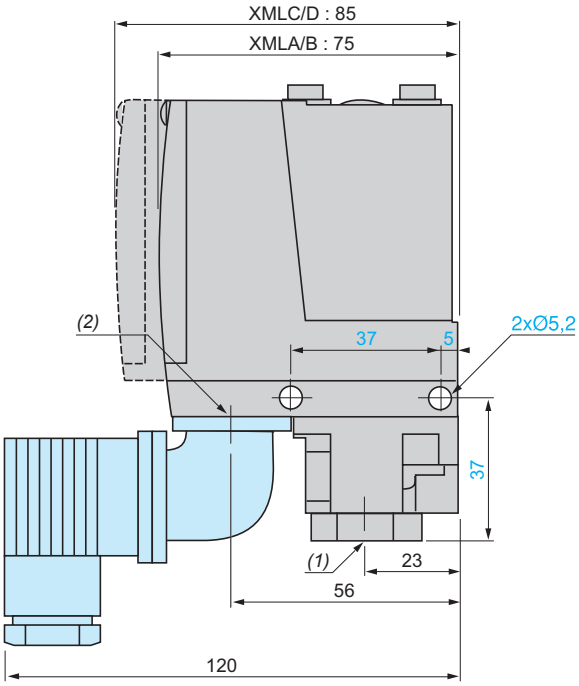
XML●L35, XML●001, XML●S

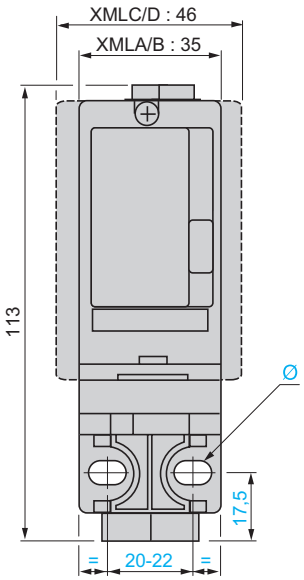


(1) 1 fluid entry, tapped G 1/4 (female) or 1/4"-18 NPTF (female)
(2) 1 electrical connections entry, tapped M20 x 1.5 mm or Pg 13.5 or 1/2"-14 NPT

XML	Øa	c1	c2
●L35, ●001	110	–	–
●S35, ●S02, ●S04	110	–	–

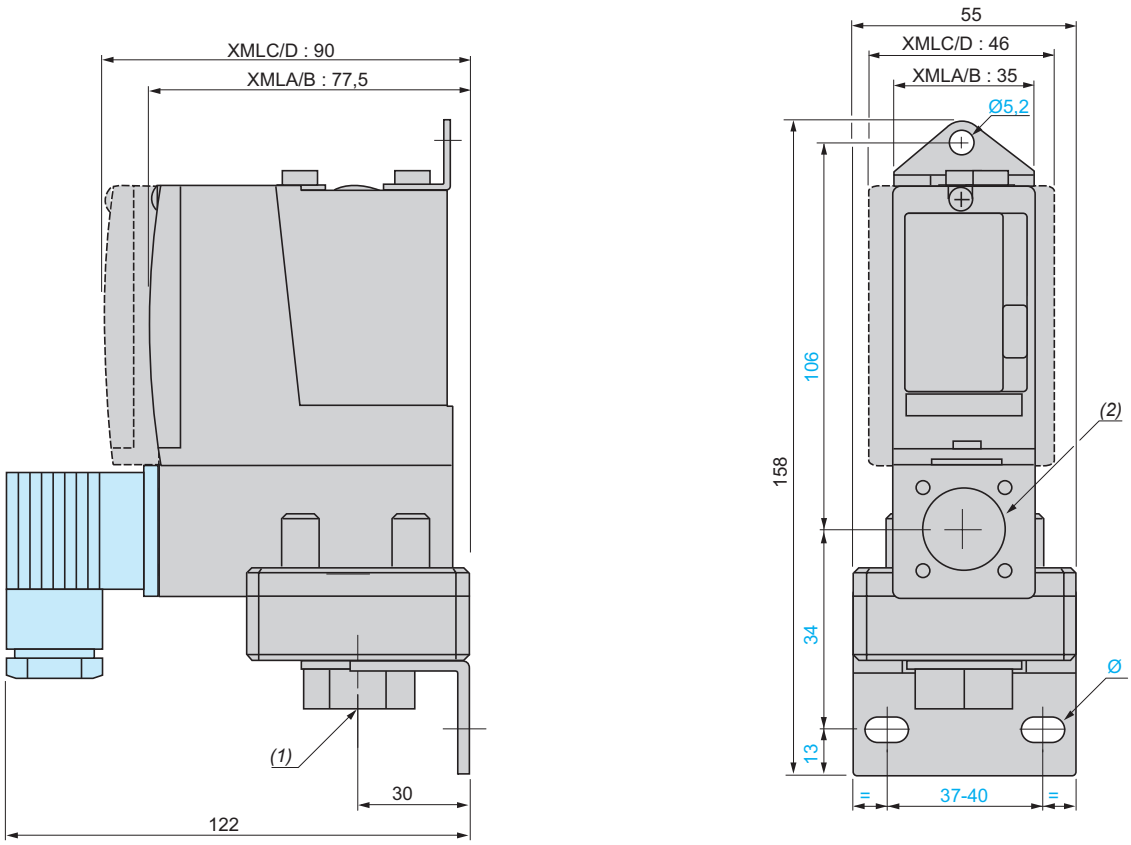
XMLAM01, XMLA004, XML●010…500





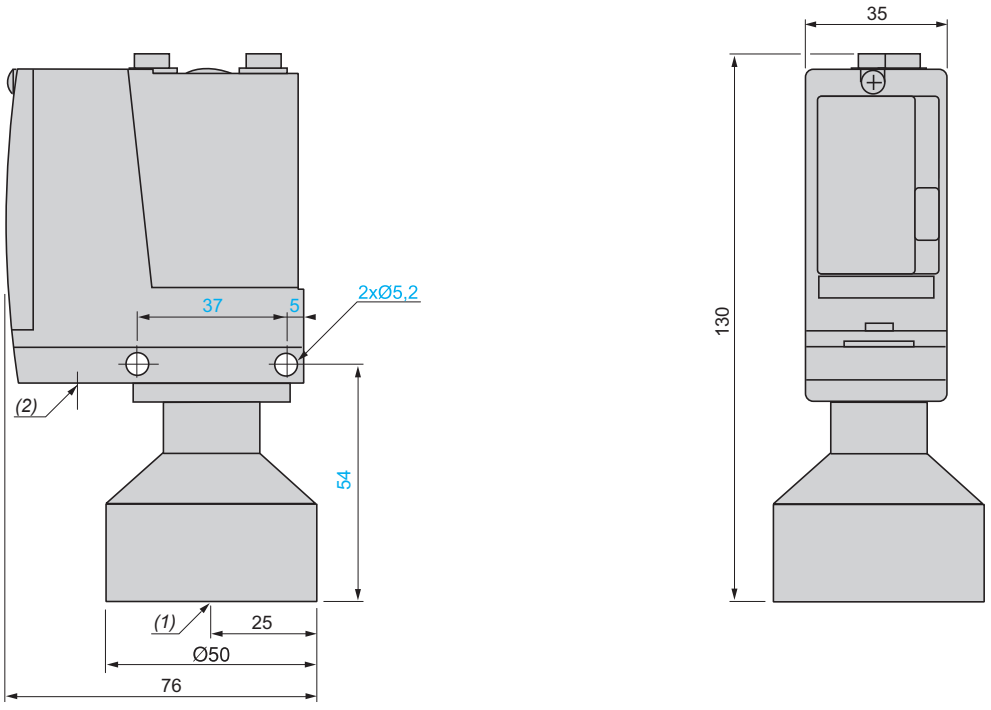
(1) 1 fluid entry, tapped G 1/4 (female) or 1/4"-18 NPTF (female)
(2) 1 electrical connections entry, tapped M20 x 1.5 mm or Pg 13.5 or 1/2"-14 NPT
Ø: 2 elongated holes Ø 5.2 x 6.7

XML●M02, XML●002, XMLB004, XMLC004



(1) 1 fluid entry, tapped G 1/4 (female) or 1/4"-18 NPTF (female)
(2) 1 electrical connections entry, tapped M20 x 1.5 mm or Pg 13.5 or 1/2"-14 NPT
Ø: 2 elongated holes Ø 10.2 x 5.2

XMLA020P



(1) 1 fluid entry, tapped G 1¼ (female)
(2) 1 electrical connections entry, tapped M20 x 1 5 mm or Pg 13 5

Characteristics: page 17
References: pages 18 to 51

Component materials of units in contact with fluid

This information will assist in checking the corrosion resistance of the pressure or vacuum switches in relation to the fluids controlled

Electromechanical pressure and vacuum switches

XML range

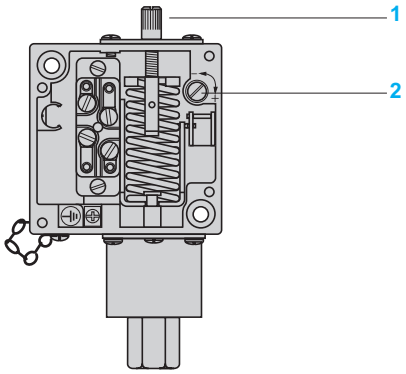
Pressure or vacuum switch reference	Component materials in contact with fluid							
	Zinc alloy	Stainless steel	Brass	Steel	Nitrile	PTFE	FPM, FKM	Aluminium
XMLAM01V●●●●, XML●M02V●●●●	■	*(1)*			■			
XMLBM03S●●●●		*(2)*				■		■
XML●M05C●●●●		*(1)*				■		
XMLBL05S●●●●		*(2)*				■		
XML●L35R●●●●, XML●S35R●●●●		*(1)*		■			■	
XML●001S●●●●		*(2)*				■		
XML●002A●●●●	■				■			
XML●002B●●●●, XML●S02B●●●●				■			■	
XMLA004A●●●●	■						■	

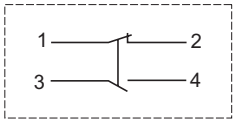
Pressure switch reference	Component materials in contact with fluid							
	Zinc alloy	Stainless steel	Brass	Steel	Nitrile	PTFE	FPM, FKM	Aluminium
XMLB004A●●●●	■				■			
XML●004B●●●●, XML●S04B●●●●				■			■	
XML●004C●●●●		*(2)*				■		
XML●010A●●●●	■						■	
XML●010B●●●●			■				■	
XML●010C●●●●		*(3)*				■		
XML●020A●●●●, XML●035A●●●●	■		■		■			■
XML●020B●●●●, XML●035B●●●●			■				■	
XML●020C●●●●, XMLA035C2C11●		*(3)*				■		
XML●020P●●●●				■			■	
XML●070D●●●●, XML●160D●●●●			■	■		■	■	
XML●070E●●●●		*(4)*	■			■	■	
XML●070N●●●●, XML●160N●●●●		*(5)*				■	■	
XML●300D●●●●			■	■		■	■	
XML●300E●●●●		*(4)*	■			■	■	
XML●300N●●●●		*(5)*				■	■	
XML●500D●●●●			■	■		■	■	
XML●500N●●●●4		*(5)*				■	■	

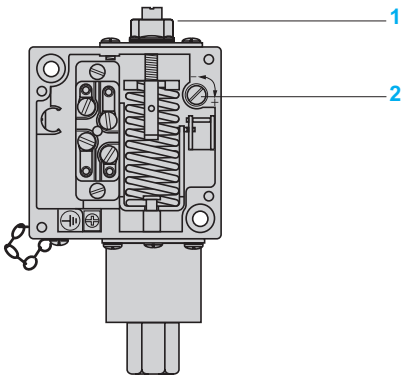
■ Component materials in contact with fluid

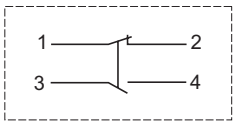
(1) 1 4307 (AISI 304L)
(2) 1 4305 (AISI 303)
(3) 1 4404 (AISI 316L)
(4) 1 4404 (AISI 316L) + 1 4462
(5) 1 4404 (AISI 316L) + 1 4305 (AISI 303)

Electromechanical pressure switches
XM range
For control circuits, ACW and ADW switches









Presentation

Pressure switches ACW and ADW are switches for control circuits, with an adjustable differential.
Pressure switches ACW are used to control the pressure of air, oils and other non corrosive fluids, up to 131 bar.
Pressure switches ADW are used to control the pressure of oils (including synthetic), up to 340 bar.

Setting, operating principle

Pressure switches ACW

The switching point on falling pressure (low point - PB) is adjusted using screw **1**.

The switching point on rising pressure (high point - PH) is made by adjusting screw **2**. This sets the differential between the low and high points, giving a switching point on rising pressure of the displayed low point setting plus the differential setting.

The two adjustments are completely independent.

Contact block operation

When the rising pressure reaches the high point setting (low point setting + differential setting), contact B (1-2) opens and contact A (3-4) closes. The contacts remain actuated until the pressure falls back to the low point setting.

Pressure switches ADW

The switching point on rising pressure (high point - PH) is adjusted using screw **1**.

The switching point on falling pressure (low point - PB) is made by adjusting screw **2**. This sets the differential between the high and low points, giving a switching point on falling pressure of the displayed high point setting minus the differential setting.

The two adjustments are completely independent.

Contact block operation

When the rising pressure reaches the high point setting, contact B (1-2) opens and contact A (3-4) closes. The contacts remain actuated until the pressure falls back to the low point setting (high point setting - differential setting).

Electromechanical pressure switches
XM range
For control circuits, ACW and ADW switches

Environment characteristics

Pressure switch type			ACW (bellows operated)	ADW (piston operated)
Conformity to standards			CE, IEC/EN 60947-5-1	
Product certifications			CSA, UL (Recognized), EAC	
Protective treatment			"TC"	
Materials			Zinc alloy case Phosphor bronze bellows	Zinc alloy case Pressure switches with drainage hole: Buna N diaphragm, steel piston, cast iron cylinder Pressure switches with Quad-Ring piston seal: Buna N diaphragm, Teflon and Viton seal, stainless steel piston and cylinder
Ambient air temperature (for operation)		**°C**	- 56…+ 85	- 30…+ 85
Fluids controlled			Air, oils and other non corrosive fluids, from - 73 to + 125°C	Oils and other fluids, from - 25 to + 120°C (for **ADW5, ADW6, ADW7S1, ADW25** and **ADW26**) Oils (including synthetic) only, from - 30 to + 125°C (for **ADW3, ADW4, ADW7, ADW23, ADW24** and **ADW27**)
Degree of protection			IP 65 conforming to IEC/EN 60529	
Fluid connection			G 1/4 (BSP female) conforming to NF E 03-005, ISO 228	G 3/8 (BSP female) conforming to NF E 03-005, ISO 228
Electrical connection	Terminals		1 tapped entry M20 x 1.5 mm for ISO cable gland. **(for ACW•M119012, ACW••M119012, ADW•M119012** and **ADW••M119012).** 1 tapped entry for n° 13 (DIN Pg 13.5) cable gland **(for ACW•M129012, ACW••M129012, ADW•M129012** and **ADW••M129012).**	

Contact block characteristics

Rated operational current			**1 CO single-pole pressure switches**	**2 CO single-pole pressure switches**
	Category AC-15		Ue 24 V 110 V 220 V 500 V	Ie 5 A 5 A 3 A 1.4 A	Ie 3 A 3 A 1.5 A 0.7 A
	Category DC-13		Ue 24 V 110 V 220 V 500 V 600 V	Ie 5 A 0.5 A 0.25 A 0.10 A 0.06 A	Ie 1.5 A 0.25 A – – –
Short-circuit protection			10 A cartridge fuse type gG	
Connection			Screw terminals Minimum clamping capacity: 1 x 1 mm^2 Maximum clamping capacity: 2 x 2.5 mm^2	

References: pages 58 to 61
Dimensions: pages 62 and 63

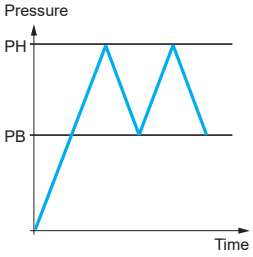
Electromechanical pressure switches
XM range
For control circuits, ACW switches
Sizes 0.70 to 131 bar (10.15 to 1900 psi)
Adjustable differential, for regulation between 2 thresholds
Fluid connection G 1/4 (female)

Pressure switches ACW | **Bellows operated**

Adjustable range of switching point (PB) (Falling pressure)			**0.07…0.70 bar (1.01…10.15 psi)**	**0.07…1.4 bar (1.01…20.3 psi)**	**0.07…5.2 bar (1.01…75.4 psi)**	**0.07…7.6 bar (1.01…110.2 psi)**
References						
Switches with 1 CO single-pole contact						
Electrical connection	With one tapped entry M20 x 1.5 mm for ISO cable gland		–	–	**ACW5M119012**	–
	With one tapped entry for n° 13 cable gland		–	**ACW4M129012**	**ACW5M129012**	**ACW1M129012**
Weight (kg)			1.750		1.550	
Switches with 2 CO single-pole contacts						
Electrical connection	With one tapped entry M20 x 1.5 mm for ISO cable gland		–	–	**ACW25M119012**	–
	With one tapped entry for n° 13 cable gland		**ACW23M129012**	–	–	**ACW21M129012**
Weight (kg)			1.750		1.550	
Complementary characteristics not shown under general characteristics (page 57)						
Possible differential (add to PB to give PH)	1 CO switches	Min.	0.04 bar (0.58 psi)	0.10 bar (1.45 psi)	0.30 bar (4.35 psi)	0.50 bar (7.25 psi)
		Max.	0.34 bar (4.93 psi)	0.40 bar (5.8 psi)	1 bar (14.5 psi)	2 bar (29 psi)
	2 CO switches	Min.	0.05 bar (0.73 psi)	0.14 bar (2.03 psi)	0.41 bar (5.95 psi)	0.9 bar (13.05 psi)
		Max.	0.48 bar (6.96 psi)	0.70 bar (10.15 psi)	1.4 bar (20.3 psi)	2.8 bar (40.6 psi)
Maximum permissible pressure			2 bar (29 psi)		7 bar (101.5 psi)	17 bar (246.5 psi)
Fluids controlled			Air, oils and other non corrosive fluids, from - 73 to + 125°C *(1)*			
Mechanical life			1 x 10^6 operating cycles (average value, depending on application)			
Cable entry, screw terminals	ACW●M119012, ACW2●M119012		1 tapped entry M20 x 1.5 mm for ISO cable gland. Clamping capacity 7 to 13 mm			
	ACW●M129012, ACW2●M129012		1 tapped entry for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5). Clamping capacity 9 to 13 mm			

(1) See "Component materials of units in contact with the fluid", page 55 .

Operating curve



— Adjustable value

Contact block connections

Other versions

Pressure switches with alternative tapped cable entries: NPT, etc. Please consult our Customer Care Centre.

Dimensions: page 62

Bellows operated

1.4…12 bar (20.3…174 psi)	**10…69 bar (145…1000 psi)**
References	
Switches with 1 CO single-pole contact	
ACW8M119012	**–**
ACW8M129012	**ACW7M129012**
1.550	2.100
Switches with 2 CO single-pole contacts	
ACW28M119012	**–**
–	**–**
1.550	**–**
Complementary characteristics not shown under general characteristics (page 57)	
0.70 bar (10.15 psi)	5.9 bar (85.6 psi)
2 bar (29 psi)	10 bar (145 psi)
1 bar (14.5 psi)	9.3 bar (134.9 psi)
2.8 bar (40.6 psi)	14 bar (203 psi)
17 bar (246.5 psi)	140 bar (2030 psi)
Air, oils and other non corrosive fluids, from - 73 to + 125°C *(1)*	
1 x 10^6 operating cycles (average value, depending on application)	
1 tapped entry M20 x 1.5 mm for ISO cable gland. Clamping capacity 7 to 13 mm	
1 tapped entry for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5). Clamping capacity 9 to 13 mm	
Other versions	Pressure switches with alternative cable entries: NPT, etc. Plade consult ou Customer Care Centre.

Dimensions:
page 62

Electromechanical pressure switches
XM range
For control circuits, ADW switches
Sizes 69 to 340 bar (1000 to 4930 psi)
Adjustable differential, for regulation between 2 thresholds
Fluid connection G 3/8 (female)

Pressure switches ADW | **Piston operated, with drainage hole** *(1)*

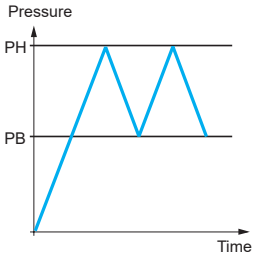
Adjustable range of switching point (PH) (Rising pressure)		**9.3…69 bar (135…1000 psi)**	**28…210 bar (406…3045 psi)**	**38…340 bar (551…4930 psi)**
References				
Switches with 1 CO single-pole contact				
Electrical connection	With one tapped entry for n° 13 cable gland	**ADW3M129012**	**ADW4M129012**	**ADW7M129012**
Weight (kg)		1.880		

Complementary characteristics not shown under general characteristics (page 57)

Possible differential (subtract from PH to give PB)	1 CO switches	Min.	2.4 bar (34.8 psi)	6.9 bar (100 psi)	8.6 bar (124.7 psi)
		Max.	9.3 bar (135 psi)	28 bar (406 psi)	38 bar (551 psi)
Maximum permissible pressure			690 bar (10,000 psi)		
Fluids controlled			Oils (including synthetic) only, from - 30°C to + 125°C *(2) (3)*		
Mechanical life			1 x 10^6 operating cycles (average value, depending on application)		
Cable entry, screw terminals	ADW●M129012		1 tapped entry for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5). Clamping capacity 9 to 13 mm		

(1) Since it is normal for piston type pressure switches (not incorporating a piston seal) to have a slight oil leakage past the piston, a drain hole through the cylinder wall is incorporated . To avoid back pressure, this hole should never be plugged. If for any reason this oil leakage is undesirable, use pressure switches incorporating a Quad-Ring piston seal .
(2) See "Component materials of units in contact with the fluid", page 55 .
(3) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

Operating curve



— Adjustable value

Contact block connections

Other versions — Pressure switches with alternative tapped cable entries: NPT, etc. Please consult our Customer Care Centre.

Dimensions: page 62

Pressure switches ADW	Piston operated, with Quad-Ring piston seal

Adjustable range of switching point (PH) (Falling pressure)	**9.3…69 bar** **(135…1000 psi)**	**28…210 bar** **(406…3045 psi)**

References

Switches with 1 CO single-pole contact

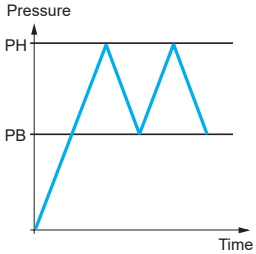
Electrical connection	With one tapped entry M20 x 1.5 mm for ISO cable gland	**–**	**ADW6M119012**
	With one tapped entry for n° 13 cable gland	**ADW5M129012**	**ADW6M129012**
Weight (kg)		1.880	

Complementary characteristics not shown under general characteristics (page 57)

Possible differential (subtract from PH to give PB)	1 CO switches	Min./max. at low setting	4.8/6.9 bar (69.6/100 psi)	14/21 bar (203/304.5 psi)
		Min./max. at low setting	8.6/10 bar (124.7/145 psi)	28/34 bar (406/493 psi)
Maximum permissible pressure			690 bar (10,000 psi)	
Fluids controlled			Oils and other fluids, from - 25°C to + 120°C *(1) (2)*	
Mechanical life			1 x 10^6 operating cycles (average value, depending on application)	
Cable entry, **screw terminals**	ADW●M119012		1 tapped entry M20 x 1.5 mm for ISO cable gland. Clamping capacity 7 to 13 mm	
	ADW●M129012		1 tapped entry for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5). Clamping capacity 9 to 13 mm	

(1) See "Component materials of units in contact with the fluid", page 55 .
(2) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

Operating curve



— Adjustable value

Contact block connections

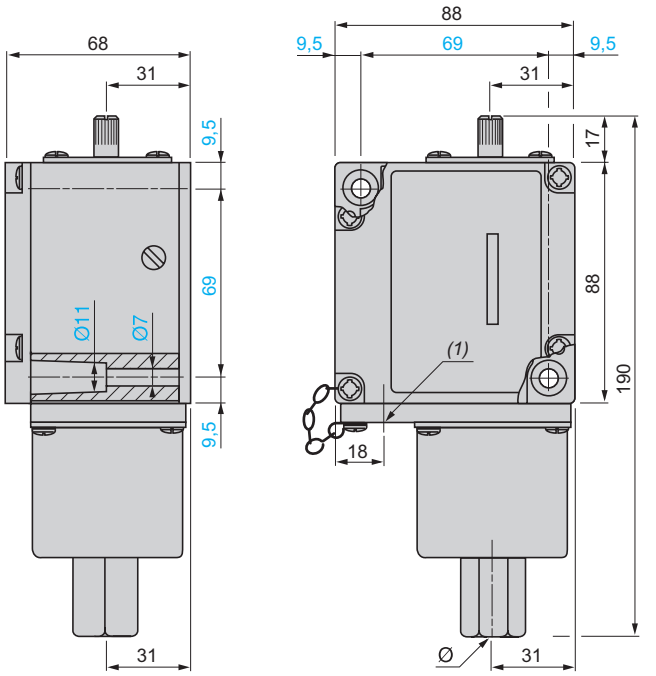
Other versions

Pressure switches with alternative tapped cable entries: NPT, etc. Please consult our Customer Care Centre.

Dimensions:
page 62

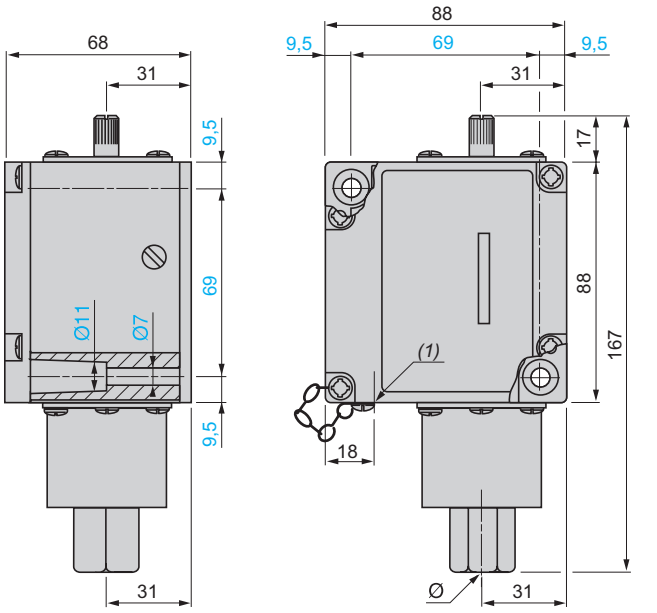
Electromechanical pressure switches
XM range
For control circuits, ACW switches

ACW4 and **ACW23**



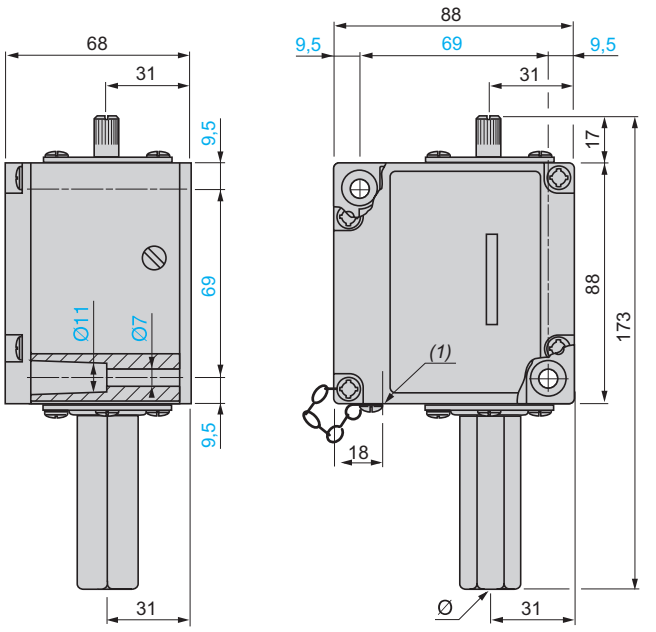
(1) Tapped entry for n° 13 or ISO M20 cable gland, depending on model
Ø: G 1/4 (female)

ACW1, ACW5, ACW8, ACW9, ACW21, ACW25 and **ACW28**



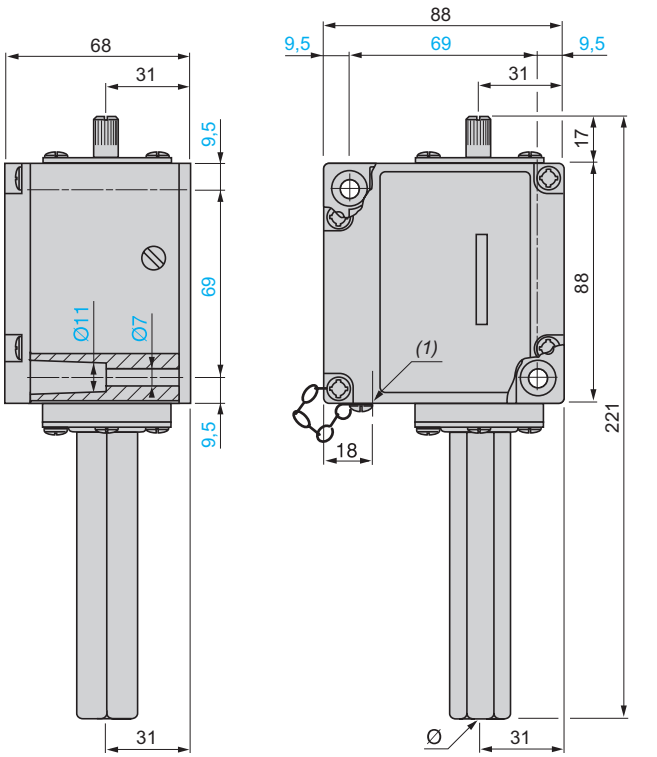
(1) Tapped entry for n° 13 or ISO M20 cable gland, depending on model
Ø: G 1/4 (female)

ACW2



(1) Tapped entry for n° 13 or ISO M20 cable gland, depending on model
Ø: G 1/4 (female)

ACW7

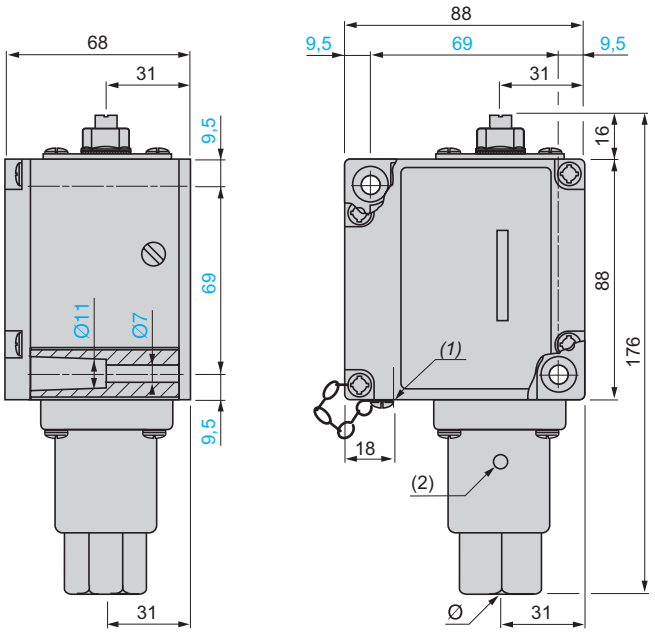


(1) Tapped entry for n° 13 or ISO M20 cable gland, depending on model
Ø: G 1/4 (female)

Characteristics: page 57
References: pages 58 to 61

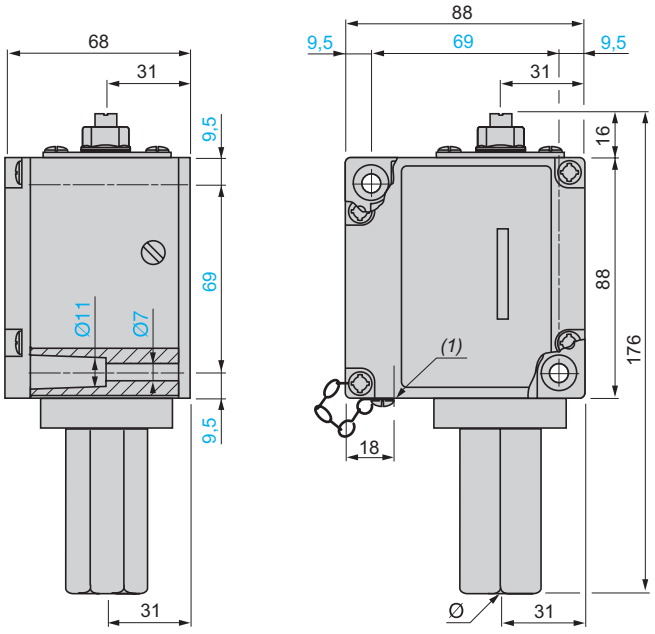
Electromechanical pressure switches
XM range
For control circuits, ADW switches

ADW3, ADW4, and **ADW7**



(1) Tapped entry for n° 13 or ISO M20 cable gland, depending on model
(2) Drainage hole, tapped G 1/8 (female)
Ø: G 3/8 (female)

ADW6



(1) Tapped entry for n° 13 or ISO M20 cable gland, depending on model
Ø: G 3/8 (female)

Characteristics: page 57
References: pages 58 to 61

Electromechanical pressure switches
XM range
For control circuits, XMX and XMA switches

Presentation

Pressure switches XMX and XMA are switches for control circuits, with an adjustable differential.
They are used to control the pressure of water and air, up to 25 bar.

Equipment fitted to the various models

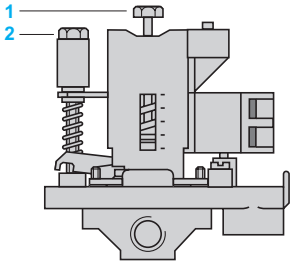
Location of setting screw

Pressure switches XMX have an internal setting screw that is only accessible after removing the cover.
Pressure switches XMA have an external setting screw that is accessible without removing the cover.

Case

Pressure switches XMX have a black opaque case.
Pressure switches XMA can have a transparent case or a black opaque case.

Setting



When setting pressure switches XMX or XMA, adjust the switching point on rising pressure (PH) first and then the switching point on falling pressure (PB).

Switching point on rising pressure
The switching point on rising pressure (PH) is set by adjusting screw-nut 1.

Switching point on falling pressure
The switching point on falling pressure (PB) is set by adjusting screw-nut 2.

References:
page 66

Dimensions:
page 69

Electromechanical pressure switches
XM range
For control circuits, XMX and XMA switches

Environment characteristics

Conformity to standards			CE, IEC/EN 60947-5-1
Product certifications			UL, CSA, CCC, EAC
Protective treatment			"TC"
Ambient air temperature	For operation	**°C**	- 25…+ 70 for 6 and 25 bar versions - 25…+ 55 for 12 bar version
	For storage		- 40…+ 70
Fluids controlled		**°C**	Air, fresh water, sea water: 0…+ 70°C for 6 and 25 bar versions 0…+ 55°C for 12 bar version
Materials	Case (black opaque cover)		polycarbonate impregnated with Lexan 500R fibreglass
	Case (transparent cover)		polycarbonate impregnated with Lexan 123 fibreglass
	Component materials in contact with fluid		chromated zinc alloy (fluid entry), canvas covered nitrile (diaphragm)
Operating position			All positions
Electric shock protection			Class I conforming to IEC 536
Degree of protection			IP 54 conforming to IEC/EN 60529
Operating rate		**Op. cycles/h**	600
Repeat accuracy			< 3.5%
Fluid connection			G 1/4 or 4 x G 1/4 (BSP female) conforming to NF E 03-005, ISO 228
Electrical connection			Terminals 2 tapped entries for n° 13 (DIN Pg 13.5) cable gland

Contact block characteristics

Rated operational characteristics		~ AC-15, B300 (Ue = 240 V, Ie = 1.5 A; Ue = 120 V, Ie = 3 A) ⎓ DC-13, R300 (Ue = 250 V, Ie = 0.1 A)
Rated insulation voltage	**V**	Ui = 500 conforming to IEC/EN 60947-1
Rated impulse withstand voltage	**kV**	U imp = 6 conforming to IEC/EN 60947-1
Type of contacts		1 CO single-pole contact, snap action
Terminal referencing		Conforming to CENELEC EN 50013
Short-circuit protection		10 A cartridge fuse type gG (gl)
Connection		Screw clamp terminals Minimum clamping capacity: 1 x 1 mm^2 Maximum clamping capacity: 2 x 2.5 mm^2
Electrical durability		AC supply 50/60Hz, Ith = 10 A Inductive circuit, utilisation category AC-15, 3 A/240 V: 1 million operating cycles

References: page 66
Dimensions: page 69

Electromechanical pressure switches

XMX switches for control circuits
Sizes 6 to 25 bar (87 to 362.5 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 1 CO single-pole contact

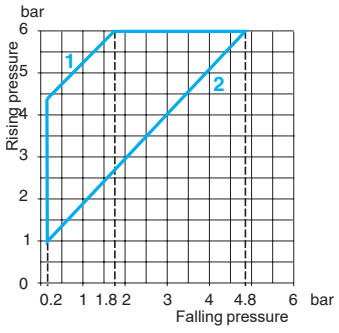
Pressure switches XMX (internal setting screw)

Adjustable range of switching point (PH) (Rising pressure)		**1…6 bar (14.5…87 psi)**	**1.3…12 bar (18.85…174 psi)**	**3.5…25 bar (50.75…362.5 psi)**	**1…6 bar (14.5…87 psi)**
Fluid connection		G 1/4 (female)			4 x G 1/4 (female)
References					
Switches with black opaque cover					
Fluids controlled	Air, fresh water, sea water *(1)*	**XMXA06L2135**	**XMXA12L2135**	**XMXA25L2135**	**XMXA06L2435**
Weight (kg)		0.430		0.650	0.430
Complementary characteristics not shown under general characteristics (page 65)					
Possible differential (subtract from PH to give PB)	Min. at low setting	0.8 bar (11.6 psi)	1 bar (14.5 psi)	3.4 bar (49.3 psi)	0.8 bar (11.6 psi)
	Min. at high setting	1.2 bar (17.4 psi)	1.7 bar (24.6 psi)	4.5 bar (65.2 psi)	1.2 bar (17.4 psi)
	Max. at high setting	4.2 bar (60.9 psi)	8.4 bar (121.8 psi)	20 bar (290 psi)	4.2 bar (60.9 psi)
Maximum permissible pressure	Per cycle	7.5 bar (108.7 psi)	15 bar (217.5 psi)	31.25 bar (453.1 psi)	7.5 bar (108.7 psi)
	Accidental	13.5 bar (195.7 psi)	27 bar (391.5 psi)	56.25 bar (815.6 psi)	13.5 bar (195.7 psi)
Destruction pressure		30 bar (435 psi)		100 bar (1450 psi)	30 bar (435 psi)
Mechanical life		1 x 10^6 operating cycles			
Cable entry		2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5)			
Pressure switch type		Diaphragm			

(1) Component materials of units in contact with the fluid, see page 55.

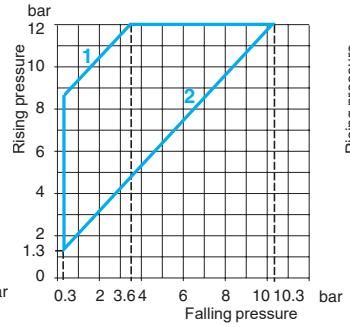
Operating curves

XMXA06●●●●●



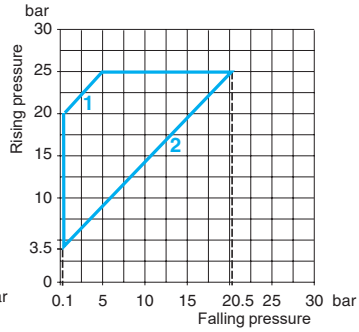
1 Maximum differential
2 Minimum differential

XMXA12●●●●●

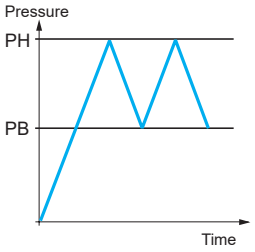


1 Maximum differential
2 Minimum differential

XMXA25●●●●●



1 Maximum differential
2 Minimum differential



— Adjustable value

Connections

Other versions

Pressure switches with alternative tapped cable entries: ISO, NPT, etc. Please consult our Customer Care Centre.

Accessories: page 68
Dimensions: page 69

Electromechanical pressure switches

XMA switches for control circuits
Sizes 6 to 25 bar (87 to 362.5 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 1 CO single-pole contact

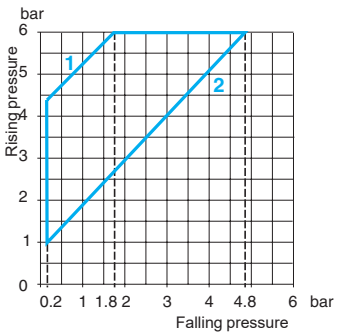
Pressure switches XMA (external setting screw)

Adjustable range of switching point (PH) (Rising pressure)		**1…6 bar (14.5…87 psi)**	**1.3…12 bar (18.85…174 psi)**	**3.5…25 bar (50.75…362.5 psi)**
Fluid connection		G 1/4 (female)		
References				
Switches with transparent cover				
Fluids controlled	Air, fresh water, sea water *(1)*	**XMAV06L2135**	**XMAV12L2135**	**XMAV25L2135**
Weight (kg)		0.430		0.650
Complementary characteristics not shown under general characteristics (page 65)				
Possible differential (subtract from PH to give PB)	Min. at low setting	0.8 bar (11.6 psi)	1 bar (14.5 psi)	3.4 bar (49.3 psi)
	Min. at high setting	1.2 bar (17.4 psi)	1.7 bar (24.6 psi)	4.5 bar (65.2 psi)
	Max. at high setting	4.2 bar (60.9 psi)	8.4 bar (121.8 psi)	20 bar (290 psi)
Maximum permissible pressure	Per cycle	7.5 bar (108.7 psi)	15 bar (217.5 psi)	31.25 bar (453.1 psi)
	Accidental	13.5 bar (195.7 psi)	27 bar (391.5 psi)	56.25 bar (815.6 psi)
Destruction pressure		30 bar (435 psi)		100 bar (1450 psi)
Mechanical life		1 x 10^6 operating cycles		
Cable entry		2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5)		
Pressure switch type		Diaphragm		

(1) Component materials of units in contact with the fluid, see page 55.

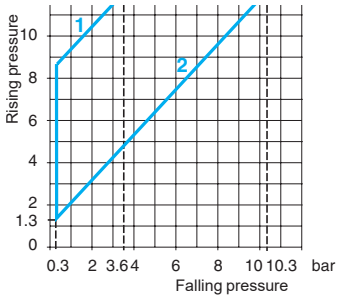
Operating curves

XMA•06•••••



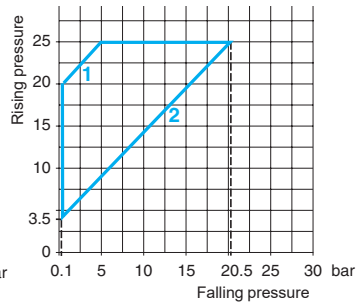
1 Maximum differential
2 Minimum differential

XMA•12•••••

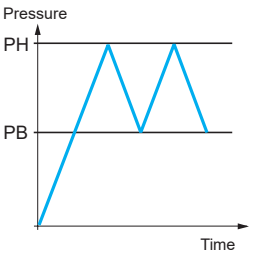


1 Maximum differential
2 Minimum differential

XMA•25•••••



1 Maximum differential
2 Minimum differential



— Adjustable value

Connections

Other versions

Pressure switches with alternative tapped cable entries: ISO, NPT, etc. Please consult our Customer Care Centre.

Accessories: page 68
Dimensions: page 69

Electromechanical pressure switches
XM range
XMX and XMA switches for control circuits
Accessories and replacement parts

XMAZL001

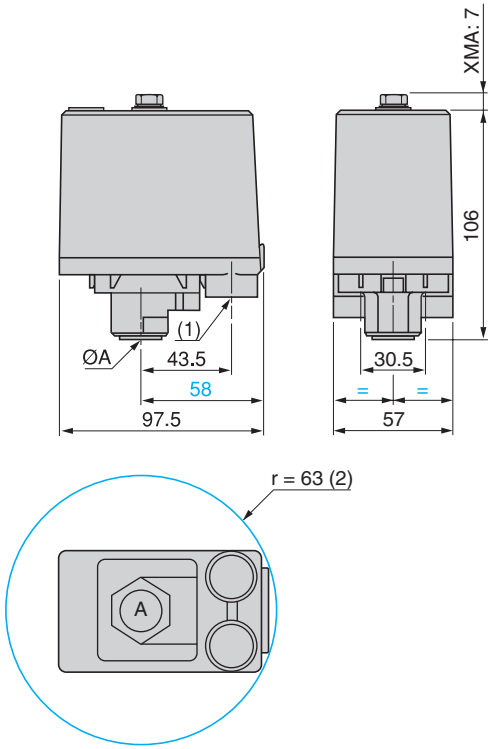
DE9PM1201

Description		Reference	Weight kg
Fixing bracket		**XMAZL001**	0.035
13P cable gland	With anti pull-out ring (for cable Ø 6…9 mm)	**DE9PM1201**	0.005

Dimensions:
page 69

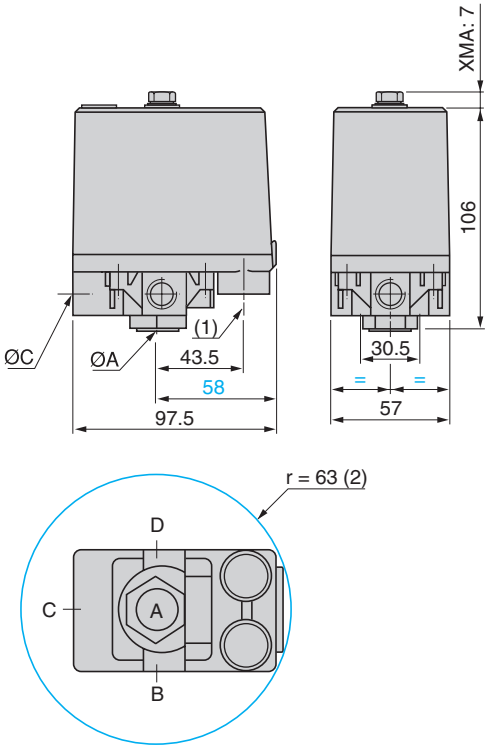
Electromechanical pressure switches
XM range
For control circuits, XMX and XMA switches
Accessories and replacement parts

XMXA06L2135, XMXA12L2135
XMAV06L2135, XMAV12L2135



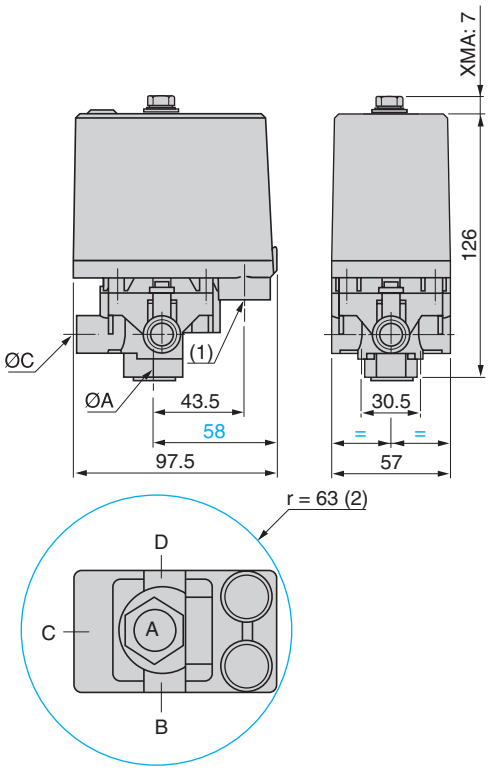
ØA = G 1/4 (female)
(1) 2 tapped entries for n° 13 cable gland
(2) Minimum clearance zone for screwing-on pressure switch at point A

XMXA06L2435



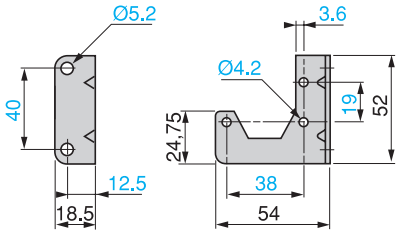
ØA = ØB = ØC = ØD = G 1/4 (female)
(1) 2 tapped entries for n° 13 cable gland
(2) Minimum clearance zone for screwing-on pressure switch at point A

XMXA25L2135
XMAV25L2135



XM●●25L2135: ØA only = G 1/4 (female)
XM●●25L2435: ØA = ØB = ØC = ØD = G 1/4 (female)

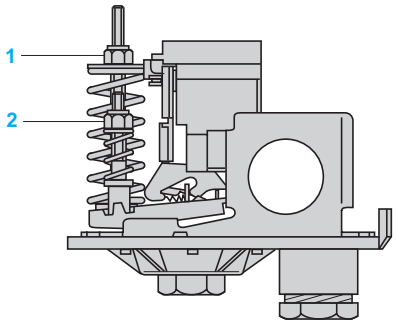
Fixing bracket
XMAZL001



(1) 2 tapped entries for n° 13 cable gland
(2) Minimum clearance zone for screwing-on pressure switch at point A

Characteristics: page 65
References: page 66

Electromechanical pressure switches
XM range
For power circuits, FSG and FYG switches



Presentation

FSG and FYG pressure switches are intended for use in power circuits to control the pressure of water, up to 10.5 bar.
They feature an adjustable differential, for regulation between 2 thresholds.

Setting

When setting the pressure switch, adjust the switching point on rising pressure (PH) first and then the switching point on falling pressure (PB).

Switching point on rising pressure
The switching point on rising pressure (PH) is set by adjusting screw-nut 1.

Switching point on falling pressure
The switching point on falling pressure (PB) is set by adjusting screw-nut 2.

Environment characteristics

Pressure switch type				**FSG● and FYG●**
Conformity to standards				CE, IEC/EN 60730
Protective treatment				Standard version: "TC"
Ambient air temperature		For operation	**°C**	0...+ 45.
		For storage	**°C**	- 30...+ 80
Fluids controlled				Fresh water, sea water (0…+ 70°C)
Materials	Case			Polystyrene, resistant to mechanical impact
	Component materials in contact with fluid			Nylon 6/6, zinc plated steel, nitrile
Operating position				All positions
Electric shock protection				Class I conforming to IEC 536
Degree of protection conforming to IEC/EN 60529				IP 20
Operating rate			**Op. cycles/h**	600
Repeat accuracy				< 2%
Fluid connection		**F●G 2, FYG●2**		G 1/4 (BSP female) conforming to NF E 03-005, ISO 228
		F●G 9		R 1/4 (BSP male) conforming to NF E 03-004, ISO 7
Electrical connection		**FSG● and FYG●**		Terminals. 2 cable entries, with grommet

Contact block characteristics

Rated operational characteristics				Ie = 10 A, Ue = ∼ 250 V conforming to EN 60730-1	
Power ratings of controlled motors		Voltage		∼ 2-pole 1-phase	∼ 2-pole 3-phase
		110 V		0.75 kW (1 HP)	1.1 kW (1.5 HP)
		230 V		1.5 kW (2 HP)	2.2 kW (3 HP)
		400 V		1.5 kW (2 HP)	2.2 kW (3 HP)
Rated insulation voltage conforming to IEC/EN 60947-1				Ui = 500	
Rated impulse withstand voltage conforming to IEC/EN 60947-1				U imp = 6	
Type of contacts				1 2-pole 2 NC (4 terminal) contact, snap action	
Short-circuit protection				20 A cartridge fuse type gG	
Connection				Screw clamp terminals.	
	Minimum clamping capacity		**mm²**	1 x 1	
	Maximum clamping capacity		**mm²**	2 x 2	
Electrical durability at an operating rate of 600 operating cycles/hour				100 000	

Electromechanical pressure switches

XM range

For power circuits, FSG switches
Size 4.6 bar (66.7 psi), adjustable differential, for regulation between 2 thresholds. Switches with 2-pole 2 NC contact.
Degree protection IP 20

Fluid connection	**G 1/4 (female)**	**R 1/4 (male)**
		
Adjustable range of switching point (PH) (Rising pressure)	**1.4…4.6 bar (20.3…66.7 psi)**	
Degree of protection conforming to IEC/EN 60529	**IP 20**	

References

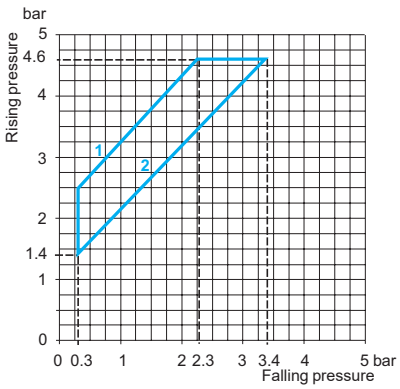
Fluids controlled	Fresh water, sea water, from 0°C to + 70°C *(1)*	**FSG2**	**FSG9**
Weight (kg)		0.340	

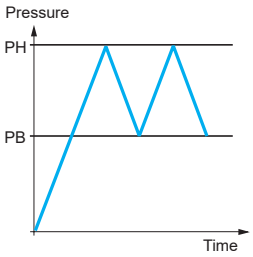
Complementary characteristics not shown under general characteristics (page 65)

Possible differential (subtract from PH to give PB)	Max. at low setting	2.1 bar (30.45 psi)
	Max. at middle setting	2.2 bar (31.9 psi)
	Max. at high setting	2.3 bar (33.35 psi)
	Min. at low setting	1 bar (14.5 psi)
	Min. at middle setting	1.1 bar (15.95 psi)
	Min. at high setting	1.2 bar (17.4 psi)
Maximum permissible pressure	Per cycle	5.75 bar (83.38 psi)
	Accidental	8 bar (116 psi)
Destruction pressure		20 bar (290 psi)
Mechanical life		1 x 10^6 operating cycles
Cable entry		2 cable entries, with grommet
Clamping capacity		–
Pressure switch type		Diaphragm

(1) Component materials of units in contact with the fluid, see page 55.
(2) Variant: for a G 3/8 female fluid entry that pivots throughout 360°, select the FSG2NEG.

Operating curves

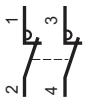




1 Maximum differential
2 Minimum differential

— Adjustable value

Connections



Electromechanical pressure switches

XM range

For power circuits, FYG switches

Sizes 7 and 10.5 bar (101.5 and 152.3 psi), adjustable differential, for regulation between 2 thresholds. Switches with 2-pole 2 NC contact. Degree of protection IP 20

Fluid connection		**G 1/4 (female)**	

Adjustable range of switching point (PH) (Rising pressure)		**2.8…7 bar (40.6…101.5 psi)**	**5.6…10.5 bar (81.2…152.3 psi)**
Degree of protection conforming to IEC/EN 60529		**IP 20**	
References			
Fluids controlled	Fresh water, sea water, from 0°C to + 70°C *(1)*	**FYG22** *(2)*	**FYG32** *(3)*
Weight (kg)		0.340	
Complementary characteristics not shown under general characteristics (page 65)			
Possible differential (subtract from PH to give PB)	Max. at low setting	2.3 bar (33.35 psi)	3 bar (43.5 psi)
	Max. at middle setting	2.5 bar (36.25 psi)	3.2 bar (46.4 psi)
	Max. at high setting	2.7 bar (39.15 psi)	3.4 bar (49.3 psi)
	Min. at low setting	1.2 bar (17.4 psi)	1.9 bar (27.55 psi)
	Min. at middle setting	1.4 bar (20.3 psi)	2.1 bar (30.45 psi)
	Min. at high setting	1.6 bar (23.2 psi)	2.3 bar (33.35 psi)
Maximum permissible pressure	Per cycle	8.75 bar (126.9 psi)	13 bar (188.5 psi)
	Accidental	15 bar (217.5 psi)	15 bar (217.5 psi)
Destruction pressure		20 bar (290 psi)	20 bar (290 psi)
Mechanical life		1 x 10^6 operating cycles	
Cable entry		2 cable entries, with grommet	
Pressure switch type		Diaphragm	

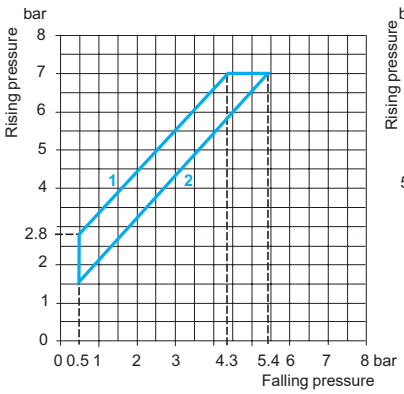
(1) Component materials of units in contact with the fluid, see page 55 .

(2) Variant: for a 2.8 to 7 bar, IP 20, pressure switch with R 1/4 (male) fluid entry, select the ***FYG29.***

(3) Variant: for a 5.6 to 10.5 bar, IP 20, pressure switch with R 1/4 (male) fluid entry, select the ***FYG39.***

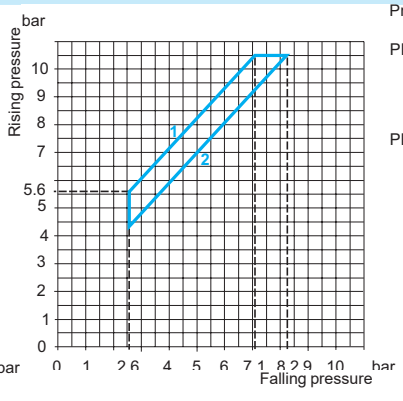
Operating curves

FYG22



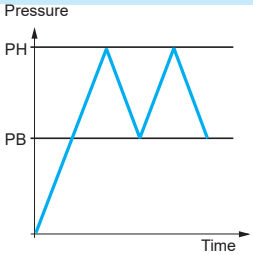
1 Maximum differential
2 Minimum differential

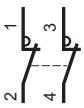
FYG32



1 Maximum differential
2 Minimum differential
— Adjustable value

Connections





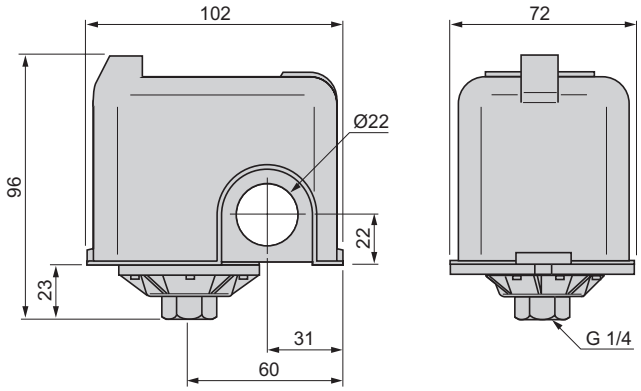
Electromechanical pressure switches

XM range

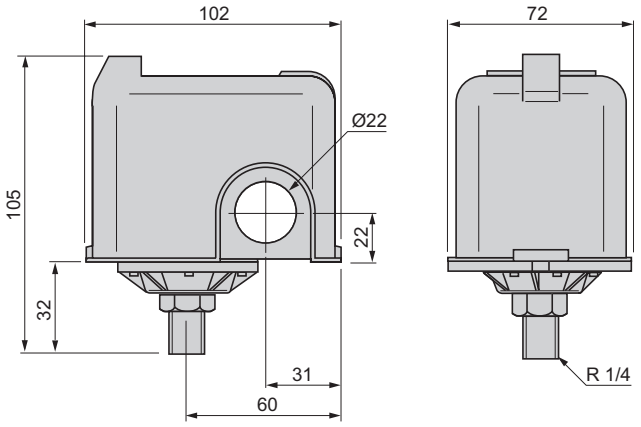
For power circuits, FSG and FYG switches

Dimensions

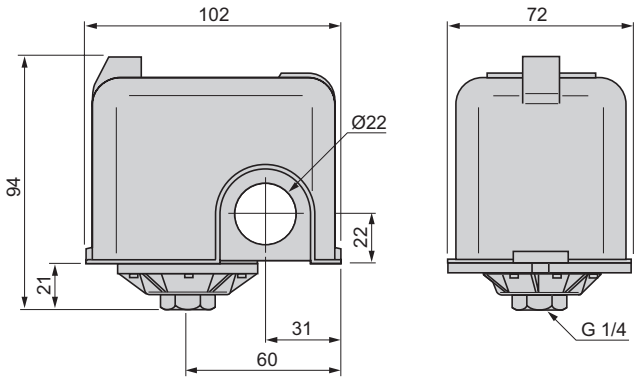
FSG2



FSG9



FYG22, FYG32



Electromechanical pressure switches
XM range
For power circuits, XMP switches

Presentation

XMP pressure switches are switches for power circuits (direct switching), with an adjustable differential.
They are used to control the pressure of water and air, up to 25 bar.

Equipment fitted to the various models

Case

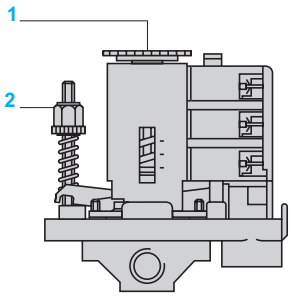
XMP Pressure switches, depending on the model, include:

- 3 types of case:
  - bare case,
  - case with On/Off knob (black): used as a switch for starting and stopping the installation,
  - case with reset knob (yellow): necessary when the safety requirements of the system include tripping in the event of overpressure. Resetting is not automatic on return to normal pressure, and it can only be achieved by manually turning the "Reset" knob.

- 2 degrees of protection:
  - IP 54
  - IP 65

Decompression valve

Depending on the model, 2 types of decompression valve can be fitted to XMP pressure switches:
- Straight, instant connection, decompression valve (connection by Ø 6 mm plastic tube).
- Straight, olive connection, decompression valve (connection by Ø 6 mm plastic or metal tube).



Setting

When setting XMP pressure switches, adjust the switching point on rising pressure (PH) first and then the switching point on falling pressure (PB).

Switching point on rising pressure
The switching point on rising pressure (PH) is set by adjusting the screw-nut or knurled knob 1.
Tighten either the nut or knurled knob 1 to increase the high point switching value.

Switching point on falling pressure
The switching point on falling pressure is set by adjusting screw-nut 2.
Tighten nut 2 to reduce the low point switching value (increase in differential).

References:
pages 76 to 81

Dimensions:
page 83

Electromechanical pressure switches
XM range
For power circuits, XMP switches

Environment characteristics

Conformity to standards		CE, IEC/EN 60947-4-1
Product certifications		EAC
Ambient air temperature	**°C**	For operation: - 25...+ 70 For storage: - 40...+ 70
Fluids controlled		Air, fresh water, sea water (0…+ 70°C)
Materials		Case: polyamide impregnated with fibreglass Component materials in contact with fluid: chromated zinc alloy (fluid entry), canvas covered nitrile (diaphragm)
Operating position		All positions
Vibration resistance		3 gn (10…500 Hz) conforming to IEC 60068-2-6
Shock resistance		50 gn, conforming to IEC 60068-2-27
Electric shock protection		Class I conforming to IEC 60536
Degree of protection		IP 54 conforming to IEC/EN 60529 or IP 65 for universal model
Operating rate	**Op. cycles/h**	≤ 600
Repeat accuracy		< 3.5%
Fluid connection		G 1/4, 4 x G 1/4 or G 3/8 (BSP female) conforming to NF E 03-005, ISO 228
Electrical connection		2 tapped entries for n° 13 (DIN Pg 13.5) cable gland

Contact block characteristics

Rated insulation voltage	**V**	Ui = 500 conforming to IEC/EN 60947-1
Rated impulse withstand voltage	**V**	U imp = 6 kV conforming to IEC/EN 60947-1
Type of contacts		One 2-pole 2 NC or 3-pole 3 NC contact, snap action
Resistance across terminals	**mΩ**	≤ 25 conforming to NF C 93-050 method A or IEC 255-7 category 3
Terminal referencing		Conforming to CENELEC EN 50013
Short-circuit protection		Cartridge fuse type Am
Connection		Screw clamp terminals. Minimum clamping capacity: 2 x 4 mm^2

Electrical durability
Operating rate: 600 operating cycles/hour
Load factor: 0.4

Power	Number of operating cycles	
kW	~ 400 V, 3-phase	~ 230 V, 3-phase
1.5	1 000 000	600 000
2.2	700 000	–
3	500 000	–

References:
pages 76 to 81

Dimensions:
page 83

Electromechanical pressure switches

XMP switches, IP 54
Size 6 bar (87 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 2-pole 2 NC or 3-pole 3 NC contact

Fluid connection	**G 1/4 (female)**	

1

2

Adjustable range of switching point (PH) (Rising pressure)	**1…6 bar (14.5…87 psi)**	
Type of contact	2-pole 2 NC	3-pole 3 NC

References *(1)*

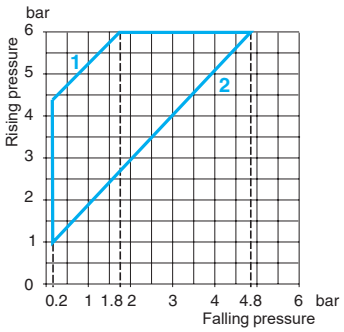
Switches without decompression valve		
Bare case 1	**XMPA06B2131**	**XMPA06C2131**
Case with reset knob 2	**XMPB06B2131**	**–**
Case with On/Off knob 2	**XMPC06B2131**	**–**
Weight (kg)	0.430	

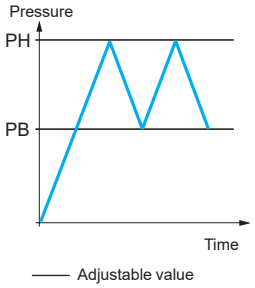
Complementary characteristics not shown under general characteristics (page 75)

Possible differential (subtract from PH to give PB)	Min. at low setting	0.8 bar (11.6 psi)
	Min. at high setting	1.2 bar (17.4 psi)
	Max. at high setting	4.2 bar (60.9 psi)
Destruction pressure		30 bar (435 psi)
Mechanical life		1 million operating cycles
Cable entry		2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5)
Pressure switch type		Diaphragm

*(1) References for individually packaged switches .Also available packaged in lots of 10 . To order, add the letter **C** to the reference selected from above. Example: reference for lot of 10 pressure switches **XMPA06B2131** in one package becomes **XMPA06B2131C** .*

Operating curves





1 Maximum differential
2 Minimum differential

Accessories: page 82
Dimensions: page 83

Electromechanical pressure switches

XMP switches, IP 54

Size 6 bar (87 psi)

Adjustable differential, for regulation between 2 thresholds

Switches with 2-pole 2 NC or 3-pole 3 NC contact

G 3/8 (female)

1

2

1…6 bar (14.5…87 psi)	
2-pole 2 NC	3-pole 3 NC

References

Switches without decompression valve

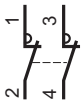
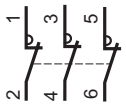
XMPA06B2242	XMPA06C2242
–	–
–	–
0.430	

Complementary characteristics not shown under general characteristics (page 75)

0.8 bar (11.6 psi)
1.2 bar (17.4 psi)
4.2 bar (60.9 psi)
30 bar (435 psi)
1 million operating cycles
2 entries incorporating n° 13 plastic cable gland (DIN Pg 13.5) Clamping capacity 9 to 13 mm
Diaphragm

Other versions Pressure switches not listed above, comprising the equipment proposed for the choice of reference. Please consult our Customer Care Centre.

Terminal connections

XMP●●●B●●●●	XMP●●●C●●●●
	

Accessories: page 82

Dimensions: page 83

Electromechanical pressure switches

XMP switches, IP 54

Size 12 to 25 bar (174 to 362.5 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 2-pole 2 NC or 3-pole 3 NC contact

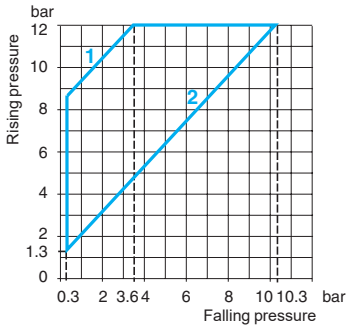
Fluid connection	**G 1/4 (female)**	
	 1	 2
Adjustable range of switching point (PH) (Rising pressure)	**1.3…12 bar (18.85…174 psi)**	
Type of contact	2-pole 2 NC	3-pole 3 NC
References *(1)*		
Switches without decompression valve		
Bare case 1	**XMPA12B2131**	**XMPA12C2131**
Case with On/Off knob 2	**XMPC12B2131**	–
Weight (kg)	0.430	
Switches with straight decompression valve, instant connection		
Case with On/Off knob 2	–	**XMPE12C2131**
Weight (kg)	0.450	
Switches with straight decompression valve, olive connection		
Case with On/Off knob 2	–	**XMPR12C2131**
Weight (kg)	0.450	

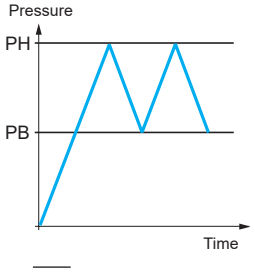
Complementary characteristics not shown under general characteristics (page 75)

Possible differential (subtract from PH to give PB)	Min. at low setting	1 bar (14.5 psi)
	Min. at high setting	1.7 bar (24.6 psi)
	Max. at high setting	8.4 bar (121.8 psi)
Destruction pressure		30 bar (435 psi)
Mechanical life		1 million operating cycles
Cable entry		2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5)
Pressure switch type		Diaphragm

*(1) References for individually packaged switches .Also available packaged in lots of 10 . To order, add the letter **C** to the reference selected from above. Example: reference for lot of 10 pressure switches **XMPA12B2131** in one package becomes **XMPA12B2131C** .*

Operating curves





1 Maximum differential
2 Minimum differential

Accessories: page 82
Dimensions: page 83

Electromechanical pressure switches

XMP switches, IP 54

Size 12 to 25 bar (174 to 362.5 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 2-pole 2 NC or 3-pole 3 NC contact

4 x G 1/4 (female)	G 3/8 (female)		G 1/4 (female)
			
2	1	2	1
1.3…12 bar (18.85…174 psi)			**3.5…25 bar (50.75…362.5 psi)**
3-pole 3 NC	2-pole 2 NC	3-pole 3 NC	2-pole 2 NC

References

Switches without decompression valve			
–	**XMPA12B2242**	**XMPA12C2242**	**XMPA25B2131**
–	–	**XMPC12C2242**	–
0.430			0.650
Switches with straight decompression valve, instant connection			
–	–	**XMPD12C2242**	–
XMPE12C2431	–	**XMPE12C2242**	–
0.450			–
Switches with straight decompression valve, olive connection			
–			
–			

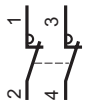
Complementary characteristics not shown under general characteristics (page 75)

1 bar (14.5 psi)		3.4 bar (49.3 psi)
1.7 bar (24.6 psi)		4.5 bar (65.2 psi)
8.4 bar (121.8 psi)		20 bar (290 psi)
30 bar (435 psi)		100 bar (1450 psi)
1 million operating cycles		1 million operating cycles
2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5)	2 entries incorporating n° 13 plastic cable gland (DIN Pg 13.5) Clamping capacity 9 to 13 mm	2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5)
Diaphragm		

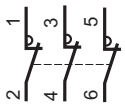
Other versions Pressure switches not listed above, comprising the equipment proposed for the choice of reference. Please consult our Customer Care Centre.

Terminal connections

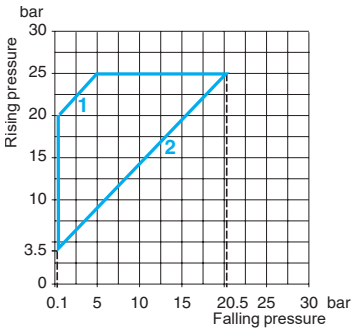
XMP●●●B●●●●



XMP●●●C●●●●



Operating curves



1 Maximum differential
2 Minimum differential

Accessories: page 82
Dimensions: page 83

Electromechanical pressure switches

XMP switches, IP 65

Sizes 6 to 12 bar (87 to 174 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 2-pole 2 NC or 3-pole 3 NC contact

Fluid connection	**G 1/4 (female)**	

Adjustable range of switching point (PH) (Rising pressure)	**1.3…12 bar (18.85…174 psi)**	
Type of contact	2-pole 2 NC	3-pole 3 NC

References

Switches with straight decompression valve, olive connection

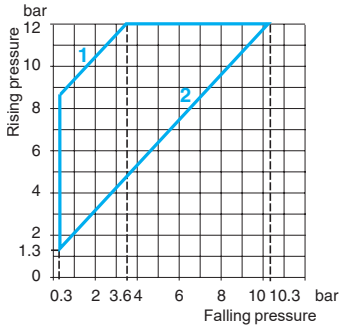
Case with On/Off knob	**XMPR12B2133**	**XMPR12C2133**
Weight (kg)	0.450	

Complementary characteristics not shown under general characteristics (page 75)

Possible differential (subtract from PH to give PB)	Min. at low setting	1 bar (14.5 psi)
	Min. at high setting	1.7 bar (24.6 psi)
	Max. at high setting	8.4 bar (121.8 psi)
Destruction pressure		30 bar (435 psi)
Mechanical life		1 million operating cycles
Cable entry		2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5)
Adjustment of high setting point (PH)		By screw-nut
Pressure switch type		Diaphragm

Operating curves

XMPR12●●●●●



1 Maximum differential
2 Minimum differential

Accessories: page 82
Dimensions: page 83

Electromechanical pressure switches

XMP switches, IP 65

Sizes 6 to 12 bar (87 to 362.5 psi)
Adjustable differential, for regulation between 2 thresholds
Switches with 2-pole 2 NC or 3-pole 3 NC contact

4 x G 1/4 (female)

1.3…12 bar (18.85…174 psi)

2-pole 2 NC	3-pole 3 NC

References

Switches with straight decompression valve, olive connection

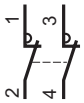
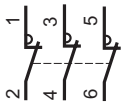
XMPR12B2433	**XMPR12C2433**
0.450	

Complementary characteristics not shown under general characteristics (page 75)

1 bar (14.5 psi)
1.7 bar (24.6 psi)
8.4 bar (121.8 psi)
30 bar (435 psi)
1 million operating cycles
2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5)
By screw-nut
Diaphragm

Other versions Pressure switches not listed above, comprising the equipment proposed for the choice of reference. Please consult our Customer Care Centre.

Terminal connections

XMP●●●B●●●●	**XMP●●●C●●●●**
	

Electromechanical pressure switches
XM range
For power circuits, XMP switches
Accessories and replacement parts

XMLZL001

DE9PM1201

References

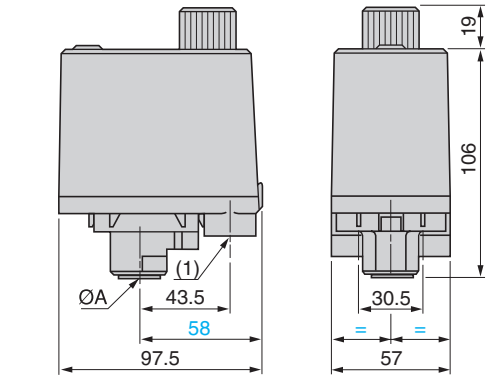
Description		Reference	Weight kg
Fixing bracket		**XMAZL001**	0.035
13P cable gland	With anti pull-out ring (for cable Ø 6…9 mm)	**DE9PM1201**	0.005

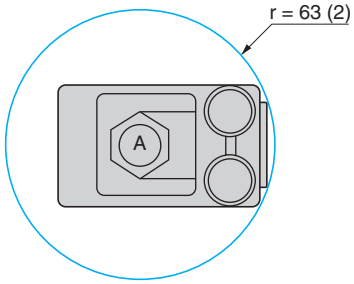
Electromechanical pressure switches
XM range
For power circuits, XMP switches
Accessories and replacement parts

Dimensions

XMP●06●●●●● and XMP●12●●●●●

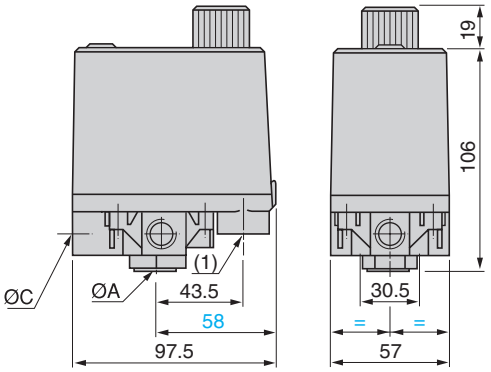
Fluid connection G 1/4 or G 3/8 (female)
Without decompression valve

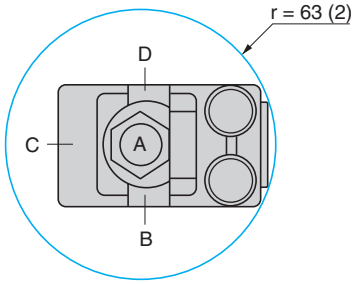




ØA = G 1/4 or G 3/8 (female)

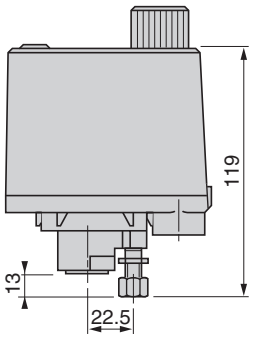
Fluid connection 4 x G 1/4 (female)
Without decompression valve



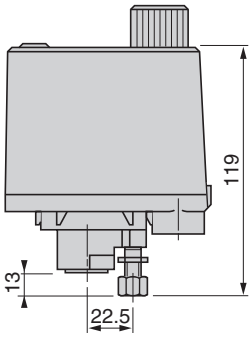


ØA = ØB = ØC = ØD = G 1/4 (female)

With straight, instant connection, decompression valve



With straight, olive connection, decompression valve

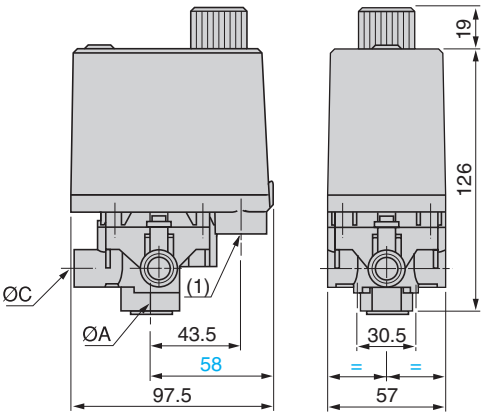


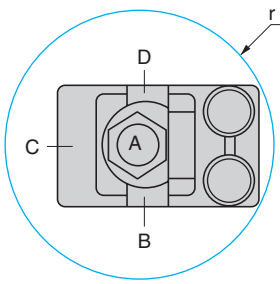
(1) 2 tapped entries for n° 13 cable gland

(2) Minimum clearance zone for screwing-on pressure switch at point A

XMP●25●●●●●

Fluid connection G 1/4 or 4 x G 1/4 (female)
Without decompression valve

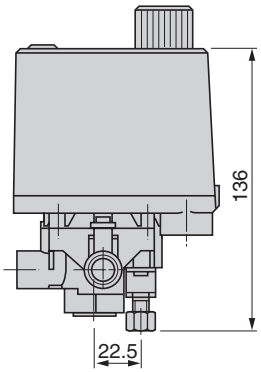




XMP●25●21●●: ØA only = G 1/4 (female)

XMP●25●24●●: ØA = ØB = ØC = ØD = G 1/4 (female)

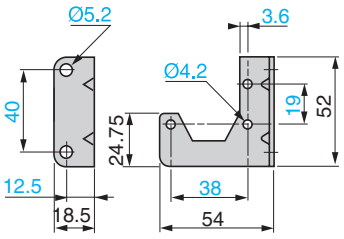
With straight, olive connection, decompression valve



(1) 2 tapped entries for n° 13 cable gland

(2) Minimum clearance zone for screwing-on pressure switch at point A

Fixing bracket XMAZL001



Product reference index

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